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Structural and Commodity Policies of Spanish Agriculture

David R. Kelch



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ABSTRACT

Spain's prospective entry into the European Community has led to Spanish adoption of EC measures to increase agricultural efficiency, augment farm incomes, create more family farms, and reduce rural unemployment. Trade liberalization in agriculture has spurred imports of inputs crucial to agricultural growth. Agricultural policies emphasizing expansion of irrigation and consolidation of farmland have led to more intensive use of the land. Commodity policies have encouraged the intensive feeding of livestock and the substitution of feed grain and oilseed crops for food grain crops.

Key words: Agriculture, Spain, structural policy, commodity policy, EC enlargement.

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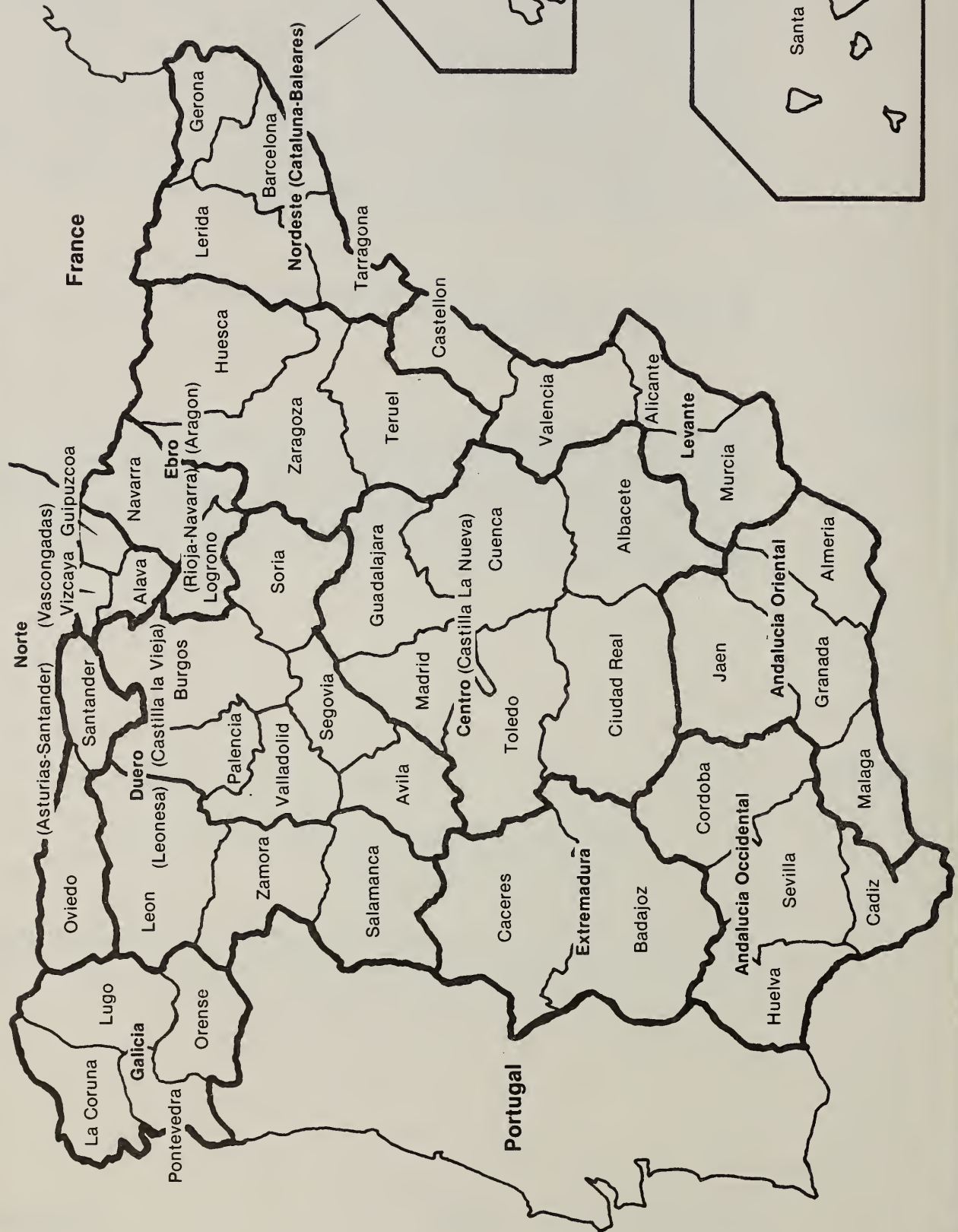
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Map of Spain



WEIGHT AND
MEASURE
REFERENCES

Hectare (ha) = 2.5 acres
Hectograde (hgdo) = 100 liters of wine of 1-percent alcohol
Hectoliter (hl) = 100 liters
Kilogram (kg) = 2.2046 pounds
Kilometer (km) = 0.62137 miles
Liter (l) = 1.056 liquid quarts
Metric ton (mt) = 2,204.6 pounds

FISCAL DATA

Exchange rates		:	Spanish consumer price index	
Spanish pesetas/U.S. dollar 1/		:	Index	
1960 = 60.00	1971 = 69.55	:	1960 = 31.1	1971 = 61.2
1961 = 60.00	1972 = 69.55	:	1961 = 31.6	1972 = 66.3
1962 = 60.00	1973 = 58.27	:	1962 = 33.6	1973 = 73.9
1963 = 60.00	1974 = 57.71	:	1963 = 36.5	1974 = 85.6
1964 = 60.00	1975 = 57.41	:	1964 = 39.1	1975 = 100.0
1965 = 60.00	1976 = 66.90	:	1965 = 44.2	1976 = 115.1
1966 = 60.00	1977 = 75.96	:	1966 = 46.9	1977 = 143.3
1967 = 60.83	1978 = 76.67	:	1967 = 49.9	1978 = 171.7
1968 = 70.00	1979 = 67.13	:	1968 = 52.4	1979 = 198.5
1969 = 70.00	1980 = 71.70	:	1969 = 53.5	1980 = 229.5
1970 = 70.00	1981 = 90.43 2/	:	1970 = 56.6	1981 = 254.6 3/

1/ Annual average.

2/ January-August average.

3/ January-June average.

Source: International Financial Statistics.

POPULATION AND
AGRICULTURAL DATA

Population 1/		:	Agricultural data 2/	
Million		:	Million ha	
1950	28.01	:	Total area	50.0
1955	29.21	:	Total agricultural area	47.5
1960	30.45	:	Tilled crop land	20.3
1965	32.06	:	Meadows and pastures	6.7
1970	33.78	:	Forests	15.2
1975	35.60	:	Other	5.2
1980	37.43	:		

1/ Source: International Financial Statistics.

2/ C.P. Rubin and J.E. Vidal. Brief on Spain and Its Agricultural Production. (Third Edition). June 1981. American Embassy, Madrid, Spain.

SUMMARY

Spanish agricultural policy is strongly affected by its prospective membership in the European Community (EC). Attempts to dovetail agriculture policy with the EC's Common Agricultural Policy (CAP) has led Spain to emulate EC methods to increase agricultural efficiency, augment farm incomes, create more family farms, and reduce rural unemployment. However, this process is complicated because Spain has poor soil, little rainfall, rough terrain, and severe erosion.

Spain is an important trading partner of the United States and a significant competitor with the United States within the EC market. In 1980, Spain imported \$1.8 billion of U.S. agricultural products of which \$647 million were corn and \$575 million were soybeans. Within the EC, Spain and the United States compete in the fruit, vegetable, and nut markets. EC membership will give Spain a competitive advantage over the United States in these markets.

Spanish structural policies for agriculture attempt to reorganize land, labor, and capital in the production, processing, and distribution of food and fiber. Structural policy in Spain has been largely focused on the expansion of irrigation and consolidation of farmland into more economic units. Commodity policies have been particularly effective in increasing the area and yield of feed barley and increasing slaughter rates and quality of meat animals.

Spanish structural problems, compared to the EC, consist of inefficient small farms, low investment rates, a troublesome labor problem, and an inefficient marketing system. Recent agricultural policy has been formulated under the pressure of high rates of inflation, negotiations on integration with the EC, decentralization of political authority, and high rates of unemployment in rural areas.

Spanish commodity policy attempts to increase both the quantity and quality of commodities produced. Government commodity regulation in Spain is similar to EC methods; both regulate prices, offer price premiums and subsidies, control quality, and intervene in the market when emergency measures are required. Spanish commodity policy is more frequently formulated on an ad hoc basis than in the EC.

Market intervention in Spain largely consists of Government financing for storing and/or processing costs, Government purchases in the market, or trade restrictions. Intervention is most severe in the grains sector. The most prominent input subsidies are for gasoline, fertilizer, and machinery.

Trade liberalization has allowed Spain to export more agricultural commodities and import more agricultural inputs which have led to increased yields of grains and meat. Integration into the EC will likely increase Spanish exports to other EC countries and with the rest of the world particularly if EC export subsidies and structural improvement funds are available. Growth of Spanish imports from outside the EC will decrease.

TERMS AND
ABBREVIATIONS

- CAP -- Common Agricultural Policy of the European Community (EC).
- EC -- European Community, an economic and customs union consisting of Belgium, Luxembourg, Denmark, France, Italy, Ireland, the Netherlands, the United Kingdom, West Germany, and Greece.
- FORPPA-- Fondo de Ordenación y Regulación de Precios y Productos Agrarios (Fund for the Development and Regulation of Agricultural Prices and Products).
- ICONA -- Instituto Nacional para la Conservación de la Naturaleza (National Conservation Institute).
- INIA -- Instituto Nacional de Investigaciones Agrarias (National Institute for Agricultural Research).
- IRYDA -- Instituto Nacional de Reforma y Desarrollo Agrario (National Institute for Agricultural Reform and Development).
- MERCORSA--Mercados en Origen de Productos Agrarios (Source Markets for Agricultural Products).
- SENPA -- Servicio Nacional de Productos Agrarios (National Agricultural Products Service).

Minimum Support Price or Guaranteed Price--price at which farmers can sell to Government.

Lower Intervention Price--price level which triggers Government action designed to increase market price.

Upper Intervention Price--price level which triggers Government action to lower market price.

Consumer Protection Price--maximum producer price that may be charged to wholesalers.

Target Price--the desired price level at which producers could make a fair profit.

Reference Price--the average price in the major markets for a given commodity.

Threshold, Entry, or Import Prices--the price set for imports which will allow domestic products to be competitive.

Variable Levy--tariff charged to raise the price of the imported product to the threshold level.

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Structural and Commodity Policies of Spanish Agriculture

David R. Kelch

INTRODUCTION

This review of Spanish agricultural policy and its relationship to the Common Agricultural Policy (CAP) system of the European Community (EC) is particularly relevant as Spain prepares to join the EC. Formulation and implementation of Spanish agricultural policy are rapidly approaching EC methods. However, potential conflicts arise because the unique constraints to agricultural production in Spain require policies that are both consonant with the CAP and effective in Spain. The CAP, dominated by northern Europe, was not designed for an arid Mediterranean country like Spain.

Spain and Portugal will likely become EC members in the mid-eighties. Greece became a full member in 1981. Of these three nations, Spain will have the greatest impact on the EC once a full member: community farmland will increase by 29 percent and its agricultural workforce will increase by a third, due solely to Spanish membership.

This paper examines the details of Spanish policy that relate to the structure--organization and operation--of agriculture and to the production and marketing of individual commodities. The current political climate, economic trends, eventual integration into the EC, and agricultural trade patterns provide a dynamic background for analysis.

Spain has undergone rapid economic growth in the past two decades. The nation's development policy emphasized increased investment in the agricultural and industrial sectors and a transfer of underemployed labor from the agricultural to the nonagricultural sector. New technological inputs in agriculture increased spectacularly, engendering an average production increase of 3.5 percent per year from 1960-78 (see tables 1 and 2).

Spain's development policy benefited by the concomitant economic boom in Western Europe throughout the sixties and early seventies. An average of 75,000 Spanish workers per year emigrated to Western Europe as guest workers, helping to alleviate the labor shortage there while easing the underemployment problem in Spanish agriculture. Spaniards working

in Western Europe also provided investment funds for Spanish agriculture by sending earnings to their families.

High rates of rural to urban migration within Spain also contributed greatly to the changing structure of employment and investment in agriculture. The Spanish agricultural sector lost over 2.5 million economically active residents from 1960 to 1979. In 1960, 41 percent of the economically active residents worked in agriculture; the proportion declined to 18

Table 1--Agricultural machinery and fertilizer use in Spain

Year	Machinery		Fertilizer	
	Four-wheel	Combine		
	tractors	harvesters	Nitrogen	Potassium
	- - - 1,000 units - - -		- - - 1,000 mt - - -	
1950	12.8	0.8	96.9	52.3
1960	56.8	1.9	242.9	69.3
1965	147.9	11.5	400.0	105.2
1970	259.8	28.0	614.8	210.6
1975	379.1	36.1	749.4	263.4
1978	455.1	40.2	793.5	272.6
1979	491.6	41.5	903.5	282.5
1980	NA	NA	984.8	294.0

NA = not available.

Source: (22).

Table 2--Agricultural production in Spain

Year	Crops <u>1/</u>	Meat <u>2/</u>	Total
		<u>1,000 mt</u>	
1960	7,292	572	7,864
1965	8,872	852	9,724
1970	10,324	1,478	11,802
1975	14,208	1,889	16,097
1980	18,665	2,445	21,110

1/ Includes wheat, barley, oats, rye, rice, corn, and sorghum.

2/ Total slaughter weight of cattle, sheep, hogs, goats, horses, poultry, and rabbits.

Source: (22).

percent by 1979 (22). 1/ These labor movements and the increased investment per agricultural worker generated an increase in agricultural productivity per worker of 8.8 percent annually from 1968-76, the highest rate of growth in Western Europe (1). The concurrent growth in the Spanish industrial sector continued to absorb relatively cheap labor and create higher income levels which, in turn, increased the demand for more and better food, especially meat. By 1978, the growth of the industrial sector had reduced agriculture's contribution to Spain's gross domestic product to 9 percent, down from nearly 23 percent in 1960 (1).

The main impetus for these rapid changes derived partly from the gradual easing of a policy of self-sufficiency in favor of a relatively more liberal trade policy. 2/ This process culminated in 1963 when Spain became a signatory of the GATT (General Agreement on Tariffs and Trade). GATT membership forced a relative liberalization of Spanish trade with less State control and made Spain more vulnerable to international market forces.

Another major influence on the recent change in agriculture evolved from Spain's relationship with the EC. Spanish trade with the EC became more important after the GATT signing and helped to spur agricultural development and trade. Spain attempted to open negotiations for entry into the EC during the sixties but was repeatedly rebuffed, largely because of EC opposition to the Franco dictatorship. Spain signed a trade agreement with the EC in 1970 that reduced tariffs for some industrial and agricultural goods. This trade agreement was the first major step toward Spain's future economic integration into the EC.

The recent emergence of democracy in Spain has helped to improve relations with the EC. Spain's application for admission to the EC was submitted in 1976 and a favorable opinion was issued by the EC in 1978 (8). This process may result in full economic integration and will continue to be one of the most influential factors shaping Spanish agricultural policy.

Background for Agricultural Policy

Current formulation of Spain's agricultural policy is dominated by political change, economic stagnation, and sensitive negotiations with the EC over terms of economic integration. The political difficulties center around the pace of the democratization process which requires some degree of regional autonomy. The economic slowdown has largely been brought about by oil price increases and low economic growth in other Western economies. Potential membership in the EC has required Spanish agricultural policy to conform to the CAP and to prepare the Spanish farm sector for competition with the more advanced agricultural sectors of the EC.

1/ Italicized numbers in parentheses refer to items in the Reference section.

2/ The U.S. PL 480 program has encouraged Spanish trade liberalization.

The unfolding of democracy through development of a constitutional monarchy and the holding of free elections has been called the "Spanish Miracle." These accomplishments mark an important beginning for democratic change in a society that has many potential power centers. Demands by various regions for autonomy have already exacerbated difficult political conditions in the transition from dictatorship to democracy. Twelve regions have been selected for autonomy. Little is known about the effects autonomous rule will have on agricultural policy at this point.

Centralized authority emerged during the nearly 800-year (711-1492 A.D.) struggle (the Reconquest) by Spanish Christian forces to reconquer Spain from the Moors. The geographical region that dominated Spain during the Reconquest was eventually called Castile and is located in what is now the center of Spain. ^{3/} Military and religious strength gathered in Castile during the Reconquest and the region ultimately became the political and economic force that is now represented by Madrid, current capital of Spain.

It is the relative geographical isolation of Castile from the rest of Spain that has allowed regional cultures to flourish. Throughout Spanish history, rugged topography has rendered quick and easy communication among regions very difficult. Spain is second only to Switzerland in Europe in altitude; over two-thirds of Spain is 1,600 feet above sea level. Castile is located on a large dryland plateau surrounded by mountain ranges and deep depressions. This uneven terrain sufficiently insulated the peripheral regions of Spain from Castile allowing various regional cultures to develop independently. These regional forces have persisted over time and in many cases can be delineated by language, history, cultural practices, topography, and climate.

The most diverse region is in the northern tier with the Catalans in the northeast, the Basques in the north-central region, and the Gallegos (Galicia) in the northwest. Both the Catalans and the Basques have their own languages, have developed industrially, and have generally efficient, relatively capital-intensive livestock sectors. The Gallegos of Galicia also have their own language, but their agriculture is unique in that it is located in the most humid and mountainous farming region of Spain. The region is typified by generally inefficient livestock production and small dairy farms. Fragmentation of the land is typical in Galicia while the Basques and the Catalans, with an ancient adherence to the law of primogeniture, are more likely to have farms of efficient size. ^{4/}

The most important irrigated region is the "Spanish Garden" that extends from Valencia to Granada. Here, extensive

^{3/} The dominance of Castile in the modern history of Spain is illustrated by the national language of Spain, Castilian, spoken by virtually every Spaniard.

^{4/} Primogeniture is the inheritance of the family estate by the eldest child (usually male).

irrigation and an almost frost-free climate have resulted in highly profitable citrus and vegetable crops produced intensively on small holdings. Aside from this irrigated region, three other large irrigation projects have allowed for intensive cultivation of the land and some degree of crop specialization: sugarbeets along the Duero river near Valladolid, corn along the Ebro river near Zaragoza, and cotton and rice along the Guadalquivir river near Seville and Cordoba.

The remaining agricultural regions of Spain that present problems for a national agricultural policy consist largely of dryland farming areas. Andalusia in the south and Extremadura in the southwest are dominated by large landed estates, have relatively few owner-operators, and are typified by the large proportion of the population dependent on agricultural employment. A severe unemployment problem has developed in Andalusia which is magnified by militant farm labor unions. Extremadura also suffers from high unemployment in the agricultural sector which, coupled with the existence of large estates, has led to the most intense pressure in Spain for the expropriation of idle lands on large estates.

The central region of Spain, south of the previously mentioned northern tier regions and north of Andalusia, is agriculturally heterogeneous and therefore difficult to categorize. In this extensive region, no single type of farm dominates, nor is there a paramount problem commanding attention. Nevertheless, this region is a composite of the others in terms of farming and suffers all of the problems of the other regions, although to a lesser degree.

Labor and irrigation policies are the most probable areas of conflict between regions. The northern and Mediterranean regions are more highly irrigated, are more intensively cultivated, and have a higher wage agriculture with more owner-operators than other areas of Spain. These regions are more likely to favor policies designed to expand and maintain irrigation and lower input costs. Labor problems dominate in the South where labor organizations are politically powerful and demand higher wages and redistribution of underutilized land. Many of these regional problems have already been addressed to some extent by the National Government; but, the impact of expanding regional autonomy on these problems has not been adequately assessed.

Economic Slowdown

Economic growth in Spain has slowed considerably since the midseventies. In 1980, real economic growth in Spain reached only 0.5 percent while inflation ran at 15 percent and unemployment reached 12 percent. Farm prices increased only 6 percent in 1980 against an 18-percent price increase of nonagricultural products. Prices of crucial inputs for agricultural production were up 35 percent from 1979 to 1980, indicating the severity of the squeeze on producers (12). Spain's dependence on foreign oil and the huge oil price increases of the past few years were major reasons for Spain's high inflation rate.

Western Europe is Spain's most important trading partner and has provided employment for many Spanish workers during the last 15 years. Countries there have also had to absorb oil price increases and have experienced slow growth and relatively high inflation (9-10 percent) the past few years. The sluggish growth is due to the tight monetary and fiscal policies designed to curb demand and thus slow inflation. Higher unemployment has resulted and forced many Spanish guest workers in the EC to return to the already swelled ranks of the unemployed in Spain. 5/

Current economic conditions and the cost-price squeeze on Spanish agriculture will probably continue and deter agricultural growth. Low returns to Spanish producers have resulted in low private investment rates in agriculture compared to the EC. Budget outlays to agriculture will have to increase in order to compensate for the lack of private investment. With a sluggish economy and tight credit, the ability of the Government to fund programs is diminished. Decreased funding will particularly hurt those areas (Andalusia and Extremadura) where the agricultural sector absorbs the unemployed from the cities as well as the Spanish guest workers returning from Western Europe. The Spanish agricultural sector is at a particular disadvantage compared to the nonagricultural sector because the most depressed areas in Spain are largely rural and prospects for emigration from these areas or any significant investment increase are not promising.

Rapid productivity gains in Spanish agriculture may not return for a long time. The transfer of modern technological inputs from advanced agricultural countries played a large part in Spanish agricultural growth. Spain will now have to rely more on an indigenous research effort to maintain or to improve agricultural productivity. Spanish research breakthroughs are not promising, however, since public funds allocated to research in Spanish agriculture have been among the lowest in advanced countries. In the past few years, Spain has annually allocated only 0.25 percent of final agricultural production to agricultural research. Other developed countries generally allocate 1-1.5 percent per year (1). The research budget in Spain is unlikely to increase significantly during a time of prolonged economic stress.

Spain and the EC

Spain's political and economic problems will be eased to the extent that the CAP provides a workable policy for Spanish agriculture and the EC reinforces Spain's democratic institutions. Negotiations with the EC began in late 1979 and a final agreement on formal acceptance is expected after December 1983.

5/ The return of experienced Spanish workers has introduced new skills to Spanish agriculture (1).

The most significant institutional development in Spain regarding EC accession was the 1968 creation of an agricultural policy institution known as FORPPA (Fondo de Ordenación y Regulación de Precios y Productos Agrarios--Fund for the Development and Regulation of Agricultural Prices and Products). This autonomous agency within the Ministry of Agriculture coordinates Spanish policies in a manner compatible with EC agricultural price and structural policies.

FORPPA performs much the same role as the Agricultural Directorate of the EC Commission. FORPPA's powers are much broader, however, in that it not only develops agricultural policy for approval by Parliament, but also conducts price negotiations, provides export restitutions, storage subsidies, processing and denaturing aids, and compensation payments. FORPPA has also patterned its price system in the same manner as the EC, utilizing target, reference, intervention, and threshold prices as well as variable import levies. Thus, trade development and integration with the EC depends a great deal on FORPPA and its ability to dovetail Spain's agricultural policy with the CAP.

FORPPA's principal problems have centered around price negotiations with producer groups. Organized producer groups in the EC (either recognized legal cooperatives or professional voluntary producer associations) have a formal role in the EC's institutional framework. These groups are effective in making their views known in the EC headquarters in Brussels and in some instances are administratively responsible for receipts, expenditures, quotas, surplus disposal, grading, processing, and marketing. ^{6/} Agricultural producer groups have not yet been adequately developed in Spain and inadequate representation of the Spanish producers' lobby in Brussels could result when Spain becomes an EC member. FORPPA organizes and funds such groups and has recently effectively included them in commodity price negotiations. Nevertheless, delayed announcements of commodity prices by FORPPA continue to hamper the effectiveness of the Spanish farmers' decisionmaking.

Integration into the EC will inevitably force Spanish farmers to form functional groups in order to influence pricing and other relevant decisions made in Brussels and to serve as administrative bodies for CAP procedures. Membership in the EC could well serve as the linchpin that holds Spanish agriculture together nationally. Because Spanish agriculture is not as advanced as northern European agriculture, it is essential that technological and structural innovations be made to increase yields and reduce costs before EC integration occurs. This pressure might force the public and private sectors in Spanish agriculture to take the necessary steps to correct the most severe structural problems.

^{6/} There are some established EC producer groups that lobby against the admission of Spain into the EC because of potential competition from Spanish producers.

Agricultural Policy Goals

Economic integration into a common market composed of agriculturally advanced nations has forced Spain to adopt many EC policy systems. The general goals of Spanish agricultural policy, much as in the EC, are to increase agricultural production and improve rural life. Specific objectives of the policy are:

- o Raise rural standards of living to the level of other economic sectors.
- o Increase agricultural efficiency to the level of the most advanced countries.
- o Provide an efficient domestic supply of food and raw materials, while improving the agricultural balance of trade.
- o Promote family farming by increasing incomes.
- o Promote regional integration for more efficient use of resources while conserving and improving natural resources.
- o Reduce Government intervention in agriculture (23).

The similarities of these Spanish objectives and those of the EC are best expressed by John Marsh in describing the emphasis of the CAP: "The main focus of the CAP has become more overtly the welfare of the farmer in relation to his counterparts in other sectors of the economy. As well as broadening to encompass social considerations, structural policy has become concerned with rectifying the divergence of regional agricultural income levels within the Community" (21).

STRUCTURAL POLICY

Improving agricultural efficiency by reducing costs per unit is a principal long-term goal of agricultural policy in Spain. The structure of agriculture serves as a key conceptual base for programs designed to improve economic efficiency in agriculture. Conceptually, agricultural structure is the arrangement of land, labor, and capital in the production and distribution of food and fiber. Spanish structural policies thus attempt to rearrange, in a more economically efficient manner, land, labor, and capital used in the production and distribution of food and fiber.

Land fragmentation into uneconomic units and lack of market infrastructure are the two most important structural problems in Spain. An apparent inequitable distribution of land is more a political problem of social justice than it is an economic problem. All of these structural problems, whether apparent or real, have exacerbated the abnormally high unemployment and low investment rates. Current policies designed to improve land use, increase irrigation, and modernize the organization of marketing should alleviate agricultural unemployment and underinvestment.

The agency largely responsible for structural reorganization in Spain is IRYDA (Instituto Nacional de Reforma y Desarrollo Agrario--National Institute for Agricultural Reform and Development). IRYDA is similar to FORPPA in that it is an autonomous agency within the Ministry of Agriculture (1978 expenditures of both agencies appear in table 3). The most important IRYDA activity involves planning and implementing irrigation programs.

Land Distribution

Spain's skewed distribution of landownership has its roots in the 10th through the 15th centuries during the Reconquest when nobles and military leaders were granted large estates for military victories (37). The political problem of inequitable distribution of land still prevails: about 1.3 percent of the landholdings account for over 50 percent of agricultural land; all of these holdings are larger than 200 hectares. At the other end of the spectrum, 50 percent of the landholdings account for less than 6 percent of the agricultural land; all of these holdings are 5 hectares or less (26).

But, physical characteristics of the land complicate any corrective action based on political viewpoints. The nature of dryland versus irrigation farming, the relatively impoverished nature of Spanish soil, and the topography of Spain present economic disadvantages to a politically based Government program of land redistribution. Lack of rainfall renders intensive dryland farming uneconomical, as yields are very low and fertilizer use is limited without water. The soil on Spanish dryland farms is half as fertile as French dryland farms, according to an Agra Europe report. Only extensive farming of Spanish dryland soil leads to a profitable enterprise; whereas, an irrigated area a tenth the size of a dryland farm could generate more revenue. Spanish policy, implemented by IRYDA, has actually increased the size of dryland farms so that few have less than 40 hectares (26).

The revised and reinforced Spanish Land Reform Act of 1979 forces "idle" or "underutilized" land into use by expropriating the use of the land or threatening to do so. Expropriation of use of the land with compensation is employed only if there is no response from the landowner; the land can then be used--not owned--by tenants, sharecroppers, or other small farmers.

These idle lands usually belong to large estates made unproductive because of uneven topography, presence of extensive forest growth, or poor soil (26). Policymakers try to employ indirect means, rather than outright expropriation, to force these lands into productive use. Such measures include policies to deny credit to estates that exceed a recommended size or to grant credit with conditions attached that would force the planting of labor-intensive and/or scarce crops.

A legal instrument more powerful than these indirect measures has been used by IRYDA to effectively redistribute land. IRYDA has the power to use the equivalent of eminent domain and to declare a potentially irrigable agricultural area to be

Table 3--Agricultural subsidies and aids in Spain, 1978

Agency	Activity	Amount
		<u>U.S.\$1,000</u>
Fund for the Development and Regulation of Agricultural Prices and Products (FORPPA)	Eggs: Premiums for exports and processing	1,085
	Poultry: Premiums for exports and processing	808
	Potatoes: Aids for processing, exports, and storage	12,660
	Onions: Storage premiums	1,172
	Tomatoes: Export restitution for processed	4,319
	Lettuce: Export restitution	183
	Citrus: Processing aids for marketing regulations	3,060
	Almonds: Export restitution	1,081
	Filberts: Export restitution	136
	Apricots: Export restitution	47
	Table grapes: Processing premiums	240
	Raisins: Export restitution	243
	Wine: Export restitution	494
	Cotton: Price and harvest support	30,782
	Sugarbeets: Aid to small farmers	7,283
	Sugarcane: Aid to small farmers	3,038
	Milk: Production premiums, storage of powdered milk and butter, and transportation	3,143
	Resin: Price supports	549
	Tobacco: Production premiums	978
	Soybeans: Seeds	572
	Sheep: Quality production, storage, and export restitution	<u>9,181</u>
	Subtotal	81,055
National Agricultural Products Service (SENPA)	Promotion of seeds	3,500
	Promotion of corn and sorghum crops	1,800
	Promotion of oilseed crops	900
	Pest control	325
	Crop insurance	15,059
	Compensation to cereal collaborating entities	5,150
	Wheat transportation	2,751
	Storage	<u>2,386</u>
	Subtotal	31,181
National Institute for Agricultural Reform and Development (IRYDA)	Irrigation	7,171
	Soil improvement	743
	Plantings	626
	Rural construction	3,990
	Rural electrification and processing plants	887
	Livestock purchase	743
	Machinery purchase	652
	Other	<u>560</u>
	Subtotal	15,372

Continued--

Table 3--Agricultural subsidies and aids in Spain, 1978--Continued

Agency	Activity	Amount
		<u>U.S.\$1,000</u>
National Conservation Institute (ICONA)	Conservation	<u>819</u>
	Subtotal	819
Agricultural Production Agency	Fertilizer subsidies	17,056
	Machinery subsidies	514
	Aid to collaborating entities for olives	124
	Aid to groups for improving grasses	377
	Soybean seed subsidies	7,378
	Pest control subsidies	312
	Artificial insemination subsidies	8,210
	Milk quality control	3,156
	Animal breeding literature	382
	Fitness premiums for reproducing animals	5,520
	Mandatory slaughter because of disease	12,804
	Vaccinations and other treatments	2,012
	Construction of stockyards	695
	Construction and expenses for regional markets	1,120
	Agricultural producer groups (APA)	<u>2,323</u>
	Subtotal	62,794
Agency for Agribusiness	Promotion	<u>1,760</u>
	Subtotal	1,760
General Technical Secretariat	National agricultural accounting network	716
	Statistical coordination	108
	Agricultural price coordination	<u>133</u>
	Subtotal	997
Training and Extension Agency	Rural community self-help	2,379
	Aid to young farmers for training	728
	Aid to farmers for business training	<u>73</u>
	Subtotal	3,180
Undersecretary of Agriculture	Aid to land consolidation and production systems	<u>1,171</u>
	Subtotal	<u>1,171</u>
	Grand total	198,980

Source: (22).

in the national interest. This official declaration forces the landowner to sell to IRYDA. The agency then proceeds to establish an irrigation zone which is eventually sold to tenants, sharecroppers, or other small farmers in the area. In 1978, IRYDA declared 25,000 hectares to be in the national interest for this purpose. Much of this land is earmarked for sale to families in order to increase the number of family farms.

Land Consolidation

Fragmentation of farms into separated parcels of land continues to be a problem in spite of a land consolidation policy developed and implemented by a predecessor agency of IRYDA. As late as 1972, an average of 14 separate plots per farm underscored the gravity of the problem. From 1950 to 1977, 20 percent of Spain's agricultural land was consolidated although the average size of a parcel of land was still only 2.65 hectares on land consolidated during this time (26, 1). Economies of scale are difficult to realize on such small parcels which inhibit use of modern technology, particularly mechanization.

Spanish land consolidation rearranges land among owners in a given area so that holdings are contiguous. No land redistribution is involved since each landholder ends up with either the same amount of land of equal quality as before or with enough land that total production capacity is the same. The land consolidation program is voluntary: a majority of the landholders that together own over 50 percent of the land in a given area must petition the Government for consolidation proceedings. The Government imposes a minimum viable economic size that is then fixed for that area. Program participants with less than the approved minimum size are granted credit to purchase the necessary additional land. No further fragmentation of the land is allowed after consolidation. Over 7 million hectares have been targeted for consolidation and over 4.7 million hectares have been effectively consolidated since 1950, although much more consolidation is needed.

IRYDA also implements a rural development program (Ordenación Rural) in conjunction with its land consolidation program. The rural development program requires IRYDA to undertake soil improvement and cultivation technique studies on the land to be consolidated. These studies take an average of 6 years to complete and are designed to promote production for the agro-industrial sector. Work was completed on 97,000 hectares (50,000 in the Duero) in 1978.

Irrigation

The capacity to irrigate farmland has been the most significant policy instrument available to Spanish policymakers. Principal structural changes fomented by irrigation policy include land distribution and land consolidation. In addition, newly irrigated agricultural land automatically results in structural changes in that a reorganization of land, labor, and capital is required to maximize economic efficiency.

Huge public investments in irrigation, initiated by the Franco regime, doubled irrigated land from 1.4 million hectares in

1950 to 2.8 million hectares in 1978. Spain currently ranks fourth in the world in the amount of land irrigated per capita (after the United States, the USSR, and India), yet is still behind Italy, Greece, and Portugal in the proportion of agricultural area irrigated.

Although only about 14 percent of Spain's farmland is irrigated, around 60 percent of its total agricultural product is produced on irrigated land. Horticultural crops are particularly demanding of water and account for a large proportion of Spain's agricultural production and exports (table 4 and app. table 1).

Yields are much higher on irrigated land than on nonirrigated land (table 4). The ability to increase yields on nonirrigated land is limited. Only those Spanish farmers with irrigated land or modern swine units have incomes comparable to EC farmers (1). This combination of factors seems to dictate that Spain continue to maintain its irrigation systems while attempting to increase total irrigated area in order to effectively compete in the EC.

New irrigation projects in Andalusia, Murcia, Valencia, and Aragon were funded in 1980 at nearly \$740 million for 1981-83, with the goal of increasing irrigation by 217,000 hectares (12). This level may not represent a net gain in irrigated area since irrigated land is lost each year to tourism projects, urban and industrial development, and contamination of underground aquifers by seawater.

Spain could technically attain a maximum irrigation level of 4-4.5 million hectares, according to hydrological engineers. Costs of developing this irrigation level would be relatively high, since the easiest areas have already been irrigated and untapped water resources are less accessible and less pure. The endeavor is complicated by current regulations and cumbersome procedures required before reservoirs can be built or water transferred from one region to another. Nevertheless, because irrigation is the most important structural policy instrument available, expansion of irrigation will continue although at a slower pace than in the last 10 years.

Unemployment

The high national unemployment rate is an acute political problem. The rising unemployment rate of agricultural labor in Spain has largely been created by general economic stagnation, the return of emigrant workers from Western Europe, and relatively high labor costs. Unemployment rates in all sectors of Spain have increased. In 1980, 1.5 million workers were unemployed while 12.8 million were employed, compared to 1974 figures of 434,000 unemployed and 13.5 million employed (12).

Spanish farmworkers earn proportionately more than their EC counterparts when productivity is taken into account. Gross agricultural production per farmworker in Spain was 40 percent

Table 4--Area and yield of selected dryland and irrigated crops, 1979

Crop	Area		Yield		Percentage of crop irrigated
	Dry-	Irri-	Dry-	Irri-	
	land	gated	land	gated	
	-- 1,000 ha --		-- Kilo/ha --		Percent
Alfalfa	87.5	251.9	19,716	52,894	74.1
Almonds	520.6	35.1	303	859	6.3
Apples	10.8	54.1	1,043	2,273	83.4
Barley	3,218.6	258.8	1,684	3,217	7.5
Corn	171.4	295.5	2,669	5,938	63.4
Cotton	3.6	46.4	804	2,665	92.7
Oats	427.6	8.2	1,016	2,604	1.8
Olives	2,032.2	107.2	6,715	18,371	5.0
Potatoes	190.8	163.9	13,212	19,013	46.3
Rice	0	68.6	0	6,230	100.0
Sorghum	7.5	35.6	2,207	5,588	82.6
Sunflowers	595.8	41.8	731	1,630	6.6
Sugarbeets	37.0	128.6	19,550	34,215	77.5
Tobacco	.2	18.2	703	1,908	99.1
Tomatoes	4.5	59.0	10,472	1/53,799	92.9
Wheat	2,322.0	218.8	1,426	3,457	8.6
Wine grapes	1,604.5	30.0	4,477	7,426	1.9

1/ Also under glass.
Source: (22).

of EC farmworkers, yet the income per Spanish farmworker was 54 percent of EC farmworkers. Recent investments per Spanish agricultural worker have been only 38 percent of investments per EC agricultural worker (1). Lack of capital also helps to explain low productivity in Spanish agriculture. The agriculture sector accounted for 18 percent of the labor force with 2.3 million workers in 1980, but only 9 percent of the gross domestic product, despite a sevenfold increase in Spanish investment in agriculture from 1960-80 (1) (table 5).

Another aspect of the labor unemployment problem relative to the EC concerns family farms. The 5- to 50-hectare farm in Spain accounts for 26 percent of total agricultural area, while this same size category accounts for over 52 percent of the EC agricultural area (1). Farms this size are usually family farms. This structural difference is also reflected in the relatively high use of nonfamily labor in Spain (table 6). Spain uses three to eight times the equivalent number of hired agricultural workers than do EC countries, excepting the United Kingdom. Because Spain depends more on organized hired labor than the EC countries, the organized labor force in Spain is able to demand and receive higher wages relative to output than other more agriculturally advanced nations.

Table 5--Investment in Spanish agriculture, 1975 prices

Year	Public	Private	Total	Total per active agricultural worker
Million pesetas ^{1/}				
1960	17,267	16,138	33,405	6,936
1965	28,681	33,138	61,819	15,722
1970	25,193	38,839	64,032	17,802
1975	30,084	103,300	133,384	47,626
1980	26,055	80,915	106,970	47,932

^{1/} Pesetas expressed in constant 1975 prices.
Source: (22).

Table 6--Types of farm labor in Western Europe, 1975

Country	Owner-operator	Family labor	Nonfamily labor
Percent			
Belgium	62.0	34.8	3.2
Denmark	56.2	34.9	8.9
France	42.5	48.0	9.5
Germany, West	40.8	55.1	4.1
Ireland	47.9	45.1	7.0
Italy	49.1	46.0	4.9
Netherlands	48.5	41.6	9.9
Spain ^{1/}	42.8	24.8	31.6
United Kingdom ^{1/}	35.1	34.0	30.7

^{1/} No reason given in source as to why total does not equal 100.

Source: (1).

The Andalusia region has the most unsettled political problem in terms of rural unemployment. Many workers in the region have been organized by the socialist and communist-dominated CC00 (Comisiones Obreras--Workers Commissions) and FTT (Frente de Trabajadores de la Tierra--United Front for Land Laborers). Rural wage rates have increased considerably as a result of the unions' efforts, but so have unemployment rates as land-owners have turned to less labor-intensive crops. This represents a fundamental problem for Spanish policymakers as they strive to devise commodity and structural programs that enhance the use of labor, ensure adequate profits to producers, and provide inexpensive, quality products to consumers.

Government policies designed to alleviate agricultural unemployment and underemployment problems are sometimes operated through commodity policies. The most labor-enhancing policies are directed at labor-intensive crops such as sugarbeets, olives, and tobacco. Small-scale sugarbeet producers receive a premium for their production and the Government has attempted to maintain olive production through various forms of subsidies and aids to help maintain employment numbers in the olive growing regions. Tobacco policy is designed to retain labor in economically depressed rural regions.

Other structural policies such as land redistribution and consolidation have secondary objectives that include lowering the unemployment rate. Irrigation and land reform programs reflect an emphasis on cultivating labor-intensive crops. None of these policies will allow agriculture to absorb the large number of unemployed and increase labor productivity at the same time. Accelerated economic growth in the industrial sector seems to be the only alternative that would attract some of the unemployed and underemployed from rural areas. Prospects for industrial growth are poor, however, since entrance into the EC is expected to displace industrial workers employed in inefficient small- and medium-size firms (1).

Marketing

Structural inefficiencies in the marketing of agricultural products in Spain begin at the farmgate and continue through all marketing levels. These inefficiencies are most acute at the retail level. Poor quality products and high prices are the most obvious consequences of the structural problems.

Marketing of food and fiber products in Spain is largely carried out in a traditional manner: labor-intensive, undercapitalized, uncoordinated, and nonprofessional. Only 4 percent of the food trade at the wholesale level and 4 percent at the retail level is handled by cooperatives or commercial chains (34). The most serious consequences of the current marketing system are poorly communicated price signals to producers and lack of quality control. This is not true for all commodities in all regions since marketing includes such various functions as contract buying, grading, processing, transporting, storing, wholesaling, and retailing. 7/

The traditional marketing system in Spain has emphasized the personal nature of a transaction. In a modern marketing system, the unknown middleman becomes the scapegoat for all the perceived flaws of an impersonal transaction. Another cultural aspect of the conflict is the traditional individualism of the Spaniard which militates against cooperative ventures designed to bypass the middleman (34). These two factors combine to complicate policy directed toward a larger, more impersonal modern marketing system.

7/ Production and marketing of poultry throughout Spain and the marketing system in the Barcelona region are exemplary exceptions.

The most important effort in Spain to improve marketing efficiency in view of EC enlargement is the attempt to form producer/marketing groups. These groups, called APAs (Agrupaciones de Productores Agrarios -- Agricultural Producer Groups), are modeled after EC producer groups (35). Subsidies and credit can be channeled through APAs to improve processing, storing, and marketing the produce of members. The APA concept is designed to eliminate middlemen by increasing the market penetration of farmers to the retail level, to control group members for coordinated action, and to provide an organizational base for EC entry.

Formation of these APAs began in 1972 and now number 67 with over 24,000 members. Over 80 percent of the APAs trade exclusively in fruits and vegetables which are important commodities exported to the EC; almost 40 percent are located in Catalonia. APAs received a total of \$26 million in subsidies and loans in 1978 (27). They constitute a legal representation to FORPPA policy negotiations. They are also used as focal points for training farmers in new methods of cultivating, marketing, accounting, and farm management.

An official governmental marketing system called MERCORSA (Mercados en Origen de Productos Agrarios--Source Markets for Agricultural Products) has grown in conjunction with APAs. This nationwide network of 16 regional markets encourages efficient mass marketing of food products and standardizes products at an EC norm (27). APAs are encouraged to use the MERCORSA marketing network as an outlet for their products and as a formal base for receiving Government technical assistance. MERCORSA markets were responsible for the sale of over 470,000 tons of fruits, vegetables, and grains worth nearly 8 billion pesetas in 1980 (27).

Other structural policies that affect the marketing system are conducted through various commodity programs. Government support for contract buying and quality control are evident in important commodities such as wine, olives, sugarbeets, corn, cotton, and tobacco. Commodity programs entering the realm of marketing will be covered in the section on commodity policies.

Other Structural Policies and Problems

Several other factors inhibit efficient use of resources in Spanish agriculture. Lack of investment prevents introduction of advanced farming methods, entry barriers to farming lead to high land and food prices, and the lack of organized farm groups does not allow a good information flow to policymakers. Specific attempts to correct these problems have been included in Spain's agricultural policy.

Agricultural Investment

The 1978 agricultural share of total credit in Spain was 5.8 percent, while the share of agriculture in GDP was 9 percent. The ratio of own capital to credit in agriculture was 13.7 in Spain and under 8 for all EC countries except Ireland and Italy (1).

Current policy in Spain is to increase public investment in agriculture and to encourage private investment. The 1980

agricultural budget was increased by 35 percent over the previous one and fewer restrictions on foreign investment resulted in over \$1 billion of West European investment in the Spanish agricultural sector. Some of this investment was most likely made in anticipation of Spain's membership in the EC (12). In addition, a 1980 law that provides for the reorganization of agricultural credit is expected to spur Spanish investment in agriculture.

Entry to Farming

The price of land is so high that very few young, aspiring farmers can raise the capital to buy and equip a sound farming enterprise. In addition, the modern, more sophisticated methods of farming require additional investment in human as well as physical capital. Numerous programs are available to all farmers, particularly young ones, to upgrade their understanding of new farm management techniques. Over 60 schools are located throughout Spain designed for the education and training of farmers (27). Special credit is available to qualified young farmers willing to invest in capital equipment and land. A major effort has been underway for several years to upgrade rural services and amenities to retain young farm families and attract new ones.

Organized Farm Groups

A Government-financed nontrade union organization representing the agricultural sector has been formed to facilitate participation in the annual FORPPA price negotiations. These 50 provincial Chambers of Agriculture (Cámaras Agrarias) represent over 2 million farmers in over 8,000 localities. The future of these chambers is unclear since many different farmers' unions representing different political persuasions and goals are not yet willing to submit to a Government-sponsored farm organization.

COMMODITY POLICY

Spanish commodity policy aims to increase agricultural production and farmers' incomes. Price regimes similar to the EC are frequently used to guarantee minimum prices to farmers, and, sometimes, to protect consumers from high prices. Numerous subsidies are granted to modernize production methods, protect farmers from financial or natural disasters, and retain or increase the employment of rural labor. Main problems facing current commodity policy are the inability to stem the rising dependence on imported corn and soybeans, the dismantling of the Government trading system in order to conform to EC policy, and rural unemployment.

Objectives and Constraints of Market Intervention

The Government has intervened frequently and pervasively in the agricultural market economy of Spain on both the domestic and international fronts. The Franco regime had almost complete control of markets under a self-sufficiency policy after the 1936-39 Spanish Civil War. The international isolation of Spain left much of the population impoverished as the Government controlled all commodity markets, suppressed independent producer and labor groups, and allowed few imports.

Trade is relatively more liberalized since the attempt to create a democracy requires less Government control. Neverthe-

less, many internal markets and imports are regulated depending on the perceived importance of a commodity to a given constituency or the national interest. Even for those commodities which are not officially controlled, FORPPA, by petitioning the Government, may intervene in the market at any time by issuing a Royal Decree from Parliament. However, Government commodity trading and market intervention decrees from Parliament must be curtailed in order to conform to the rules of the CAP.

There are unique political, social, and economic factors used to justify Government intervention and control of agricultural markets in Spain. The foremost justification is to support crops that cannot be profitably replaced in a region because of growing conditions or soil conservation needs. This is particularly true of the dryland farming areas of Castile, Aragon, Extremadura, and Andalusia where alternatives to barley, wheat, rye, olive, and wine production are limited. These crops are also important elements in the antidesertification of these regions; without crops, the land would lose its thin layer of topsoil.

Because of their socioeconomic setting, some regions of Spain depend on market intervention measures to stabilize incomes at a politically acceptable level. Examples of these measures have already been pointed out regarding the labor problems in Andalusia and the land fragmentation problem in Galicia. Although these problems are structural in nature, direct intervention in commodity markets has been used to assist structural adjustment. ^{8/} Some commodity programs (such as those for wheat, tobacco, and sugarbeets) designed to reinforce structural policies are effected through total market control of prices at all levels.

Fruits and vegetables are Spain's most important agricultural exports and generally are the least regulated internally (tables 7 and 8). ^{9/} Spanish agricultural products subject to competition from imports and thus to world price fluctuations are the most highly regulated domestically. This is particularly true for grains and oilseeds since Spain heavily depends on imports of corn and soybeans from the United States, Brazil, and Argentina. Spain's agricultural trade deficit with the United States has been increasing while a surplus with the EC has been accumulating, although Spain remains on balance a deficit country in agricultural trade (table 8).

Commodity Policy
Formulation and
Agency Participation

FORPPA implements commodity policies. These policies are formulated by various FORPPA committees and then submitted to the Agricultural Council in Parliament for approval. The policy committees are composed of members of the Ministries of

^{8/} However, it is also true that some policies can be contradictory. For example, artificially high milk prices allow inefficient operators to resist land consolidation programs in Galicia.

^{9/} Also see appendix tables 1-4 for disaggregated trade data.

Table 7--Contribution of various commodities to total value of Spanish agricultural production, 1977

Product	Percentage of production value	Product	Percentage of production value
	<u>Percent</u>		<u>Percent</u>
Crops:		Livestock, livestock	
Barley	4.0	products, and	
Fruits and	25.2	poultry:	
vegetables		Beef	7.9
Maize	1.2	Eggs	4.4
Olive oil	3.3	Milk	9.3
Potatoes	8.5	Pig meat	7.3
Sugarbeets	2.8	Poultry meat	5.7
Wheat	4.4	Sheep and goat	
Wine	4.0	meat	4.0
Other	4.5	Other	3.5
Total	57.9	Total	42.1

Source: (12).

Table 8--Spanish trade with the world, the EC, and the United States ^{1/}

Year and area	Agricultural trade				Nonagricultural trade			
	Imports		Exports		Imports		Exports	
	U.S. \$1 million	Pct	U.S. \$1 million	Pct	U.S. \$1 million	Pct	U.S. \$1 million	Pct
1967:								
World	772.6	100.0	595.7	100.0	3,453.1	100.0	1,375.2	100.0
EC	153.6	19.9	342.8	57.6	1,607.7	46.6	601.1	43.7
United States	205.7	26.6	56.5	9.5	582.0	16.9	200.8	14.6
1973:								
World	1,880.2	100.0	1,399.0	100.0	9,536.1	100.0	5,161.9	100.0
EC	253.3	13.5	884.2	63.2	4,087.9	42.9	1,547.0	30.0
United States	566.9	30.2	140.4	10.0	2,469.7	25.9	714.3	13.8
1980:								
World	4,374.5	100.0	3,565.2	100.0	33,900.7	100.0	20,826.7	100.0
EC	678.8	15.5	2,069.8	58.1	10,419.0	30.7	10,195.6	49.0
United States	1,789.2	40.9	200.9	5.6	4,406.0	13.0	1,107.2	5.3

^{1/} See appendix tables 1-4 for disaggregated data.

Source: (36).

Agriculture and Commerce and representatives of the interested private sector, including consumers. The commodity policies framed in these committees take into account domestic and international market conditions, production costs, returns to investment, consumer interests, labor demands, and the potential long-term social impact of the policy itself.

Broadly based participation in policy formulation is enhanced by including members of agricultural producer groups in the FORPPA commodity committees. Between February and April, the FORPPA policy committees and the interested agricultural producers meet in committee to negotiate the specifics of a commodity policy. The final responsibility then rests with each FORPPA committee to set the various prices, storage rates, and financial and volume quotas. The entire policy package is then submitted to the Agricultural Council for approval.

Since each commodity has a unique planting, harvesting, and trading cycle, committee meetings are held and policy prices announced so that farmers' decisions are based on appropriate and timely information. Policy announcements on prices are often delayed. These delays and uncoordinated announcements have created much confusion and have made it difficult for farmers to decide what, when, and how much to plant.

Methods of Market Regulation

The Spanish market intervention system relies on a domestic price regime, stock management, and Government control of foreign trade. Timing of the withdrawal or release of stocks and control of the flow of imports and exports are crucial to the effective operation of the Spanish pricing system.

FORPPA is aided by a subsidiary executive agency that regulates agricultural commodity markets. SENPA (Servicio Nacional de Productos Agrarios -- National Agricultural Products Service) is an older agency absorbed by FORPPA. SENPA buys, handles, and stores commodities and keeps records of the necessary transactions required by Government policy. SENPA also imports certain agricultural inputs that are resold to farmers at below cost. It occasionally subsidizes consumer purchases of agricultural products in case of abrupt consumer price rises. SENPA also imports and transports commodities. Agricultural aids and subsidies dispensed by Government agencies are listed in table 3.

The domestic pricing system for regulated commodities in Spain follows the EC system closely. A target price is set and upper and lower intervention prices are set around the target price (see app. table 5 for 1980/81 and 1981/82 target prices). When the reference price drops to or below the lower intervention price, the Government may purchase the commodity and store it, authorize storage payments, grant export credits, or facilitate exports in some other way. If the reference price is at or above the upper intervention price, then the Government may release stocks, lower import barriers, or relax regulations in some way to increase supply. The minimum support price is the price at which the Government must buy

all quantities offered and is set at a level that provides producers with a sufficient return to attain target production levels. The consumer protection price is a maximum retail price and is usually set at a peseta/mt level. The entire system can be circumvented under extraordinary circumstances by FORPPA when it petitions for and is granted a Royal Decree from the Government (See definitions of price terms on p. v).

The Government has total control over wheat, tobacco, sugarbeets, and hops; only one fixed price is offered. Delivery to the appropriate agency of a minimum quality is then required of all producers. There are other crops for which the Government has set a guaranteed minimum price which allows producers to voluntarily deliver all of their crop of a given quality at the guaranteed minimum price to the appropriate Government agency, usually SENPA. These commodities include olive oil, corn, barley, rye, rice, pulses, sunflowers, cotton, wine, beef, pork, poultry, eggs, cow's milk, and milk products. In the 1978/79 season, all commodities mentioned above accounted for 65 percent of Spain's total agricultural production (1).

Programs for commodities regulated by a voluntary delivery system use minimum support prices, threshold prices for imports, monthly payments for storage and financing, and fixed commercial margins for every product at wholesale and retail. For some of these commodities, FORPPA may set limits on financial aid, restrict the volume eligible for subsidies, determine Government levels of stocks, or set the amount of funds available for export restitutions and crop insurance. These methods of market control will be more fully examined when individual commodities are discussed.

An additional method of control that FORPPA may exercise is through the manipulation of imports and exports. Spain has four general types of import regimes:

- o State trading--This is carried out by SENPA and usually accounts for around 50 percent of total agricultural imports. State-traded products include most cereals (except corn and sorghum), vegetable oils, some oilseeds, most dairy products, cotton, tobacco, and meat.
- o Liberalized trading--A simple import declaration is required and no control is exercised by the Government. The small number of products covered is increasing. Products covered are live plants, roots and tubers, and agricultural raw materials such as rubber and seeds.
- o Global quotas--Import quotas are set for hops, preserved meats and fruits, soup, beer, fishmeal, and various food products.
- o Mixed trading and bilateral--This covers all products not mentioned in the above three types of import regimes. They are usually politically sensitive

products and subject to close governmental control. Some products included are fresh fruits, corn and sorghum, some cereal products, sugarbeets, confectionery, and some wines (13).

Rationale for these import regimes is to allow internal supply to expand and effectively compete with imports while satisfying internal demand without creating endemic surpluses or deficits. Methods used by Spain to control the flow of trade are quite similar to those employed by the EC with one exception: State control of trade as practiced by Spain is not allowed in the EC and is currently being relaxed by Spain in preparation for EC integration. Spain and the EC also use threshold prices, variable levies, import taxes, quotas, and trade suspension to attenuate trade problems. ^{10/}

The threshold price is set at a level which theoretically allows imports to enter the domestic market at a price equal to or above the domestic price. Commodities with recognized international prices such as barley, corn, sorghum, oilseeds, vegetable oils, protein meals, and cheese usually have threshold prices. The level of the threshold price depends on the price level in the domestic market and on the transporting and handling costs of the imported goods to consumption centers. The variable levy represents the difference between the world price and the threshold price. A deficit area, Barcelona, is used to calculate grain transporting and handling costs just as Duisburg, West Germany, is used in the EC. Monthly increments are calculated and added to the threshold price to compensate for domestic storage costs.

Grain Policy

The Government of Spain has created executive agencies to regulate grain markets. These agencies manipulate the grain markets principally through price regimes and stock management. Management of the feed/livestock sector is rapidly approaching methods employed by EC counterpart agencies.

Recent objectives of Spanish grain policy have been:

- o Increase rural employment.
- o Increase production of protein nutrients and feed grains.
- o Liberalize trade and compete effectively.

^{10/} A series of taxes on agricultural imports can also be imposed in Spain. Imports are taxed at a level designed to compensate for the domestic tax on the same commodity. A luxury tax may also be levied on an imported commodity at the discretion of the Government. Another tax can be levied on certain imported products to finance agricultural social programs. However, these taxes are not usually significant compared to the variable levy.

- o Prepare for the CAP by adopting EC methods of market regulation and policy implementation.
- o Aid in modernization of the livestock sector (26).

The central thrust of grain policy during the last two decades has been to replace domestic wheat with domestic feed grains and increase yields of all grains. A steady decline in the support price ratio of wheat relative to other grains reflects this policy. From 1953/54 to 1980/81, support prices of wheat relative to prices for corn have declined by 40 percent; oats, 35 percent; rye, 25 percent; barley, 24 percent; and sorghum, 20 percent (table 9).

The policy of encouraging the substitution of other grains for wheat has been considerably successful for barley. Barley area increased 146 percent from 1960 to 1978, compared to a decline in wheat area of 35 percent for the same period. But, corn and soybean areas have only increased by marginal amounts (tables 13 and 18), because climatic factors prevent yields sufficient to encourage greater production. The decline in the wheat/other grains price ratio also partially reflects conformance to the EC policy objective of equalizing cereal intervention prices.

SENPA, under FORPPA, is responsible for the functioning of the grain markets. It provides for financing and storing, arranges price support payments, and oversees producer-processor contracts. SENPA has a grain storage capacity of 4.5 million metric tons, either through ownership or leasing arrangements and thus can directly affect grain market volume.

Separate marketing and buying periods are set for the winter and spring grains and for feed pulses. The marketing period determines the time in which consumer price regulations are in effect and the buying period represents the period of time for farm sales to SENPA and computation of storage costs. The marketing and buying periods for the winter grains (wheat, barley, oats, and rye) are identical, from June 1 to May 31. For the spring grains (corn, sorghum, and millet), the marketing period is from September 1 to August 31 and the buying period is from September 1 to April 30.

SENPA includes charges above the producer prices when it sells to private dealers. These include monthly charges for storing and financing (which are paid to producers if they store the grain) and a handling fee. For wheat, an extra fee is charged for classification which amounted to 150 pesetas/mt during the 1978/79 season. Figures in table 10 indicate the importance of the storing, financing, and handling charges.

Storing and financing charges apply to corn and sorghum from October 1 to May 31, and for rice from November 1 through June 30. The period of time for which these charges apply to

Table 9--Minimum guaranteed prices and wheat/other grain price ratios 1/

Marketing:	:	:	:	:	:	:	:
year	: Wheat 2/:	Corn	: Sorghum	: Barley 3/	: Oats	: Rye	
				<u>Pesetas/kilo</u>	<u>4/</u>		
1953/54	: 3.92	2.30 (1.70)	NA	2.20 (1.78)	1.80 (2.18)	2.25 (1.74)	
1954/55	: 3.29	2.30 (1.70)	NA	2.20 (1.78)	1.80 (2.18)	2.75 (1.43)	
1955/56	: 4.17	2.40 (1.74)	NA	2.30 (1.81)	1.90 (2.20)	2.82 (1.48)	
1956/57	: 4.17	2.40 (1.74)	NA	2.30 (1.81)	1.90 (2.20)	2.82 (1.48)	
1957/58	: 4.96	2.40 (1.74)	NA	3.30 (1.50)	2.88 (1.72)	3.54 (1.40)	
1958/59	: 5.06	3.50 (1.45)	NA	3.40 (1.49)	3.00 (1.69)	3.65 (1.39)	
1959/60	: 5.06	3.50 (1.45)	NA	3.40 (1.49)	3.00 (1.69)	3.65 (1.39)	
1960/61	: 5.06	3.60 (1.41)	NA	3.50 (1.45)	3.10 (1.63)	3.65 (1.39)	
1961/62	: 5.56	3.60 (1.55)	NA	3.50 (1.59)	3.00 (1.85)	4.00 (1.39)	
1962/63	: 5.56	3.60 (1.55)	NA	3.50 (1.59)	3.10 (1.79)	4.00 (1.39)	
1963/64	: 6.16	4.35 (1.42)	4.20 (1.47)	4.05 (1.52)	3.50 (1.76)	4.40 (1.40)	
1964/65	: 6.66	4.35 (1.53)	4.20 (1.59)	4.05 (1.64)	3.50 (1.90)	4.40 (1.50)	
1965/66	: 6.66	4.35 (1.53)	4.20 (1.59)	4.05 (1.64)	3.50 (1.90)	4.40 (1.50)	
1966/67	: 6.66	4.85 (1.37)	4.75 (1.40)	4.75 (1.40)	4.45 (1.50)	5.60 (1.19)	
1967/68	: 6.66	5.06 (1.32)	4.90 (1.36)	4.90 (1.36)	4.60 (1.45)	5.10 (1.31)	
1968/69	: 6.70	5.40 (1.24)	5.25 (1.28)	5.30 (1.26)	5.15 (1.30)	5.35 (1.25)	
1969/70	: 6.70	5.55 (1.21)	5.25 (1.28)	5.30 (1.26)	5.15 (1.30)	5.35 (1.25)	
1970/71	: 6.60	5.70 (1.16)	5.25 (1.26)	5.35 (1.23)	5.15 (1.28)	5.35 (1.23)	
1971/72	: 7.00	5.70 (1.23)	5.25 (1.33)	5.35 (1.31)	5.15 (1.36)	5.50 (1.27)	
1972/73	: 7.30	5.70 (1.28)	5.25 (1.39)	5.35 (1.37)	5.15 (1.42)	5.50 (1.33)	
1973/74	: 7.33	5.70 (1.29)	5.25 (1.40)	5.35 (1.37)	5.15 (1.42)	5.50 (1.33)	
1974/75	: 7.82	7.00 (1.12)	6.45 (1.21)	6.18 (1.27)	5.90 (1.33)	6.10 (1.23)	
1975/76	: 9.32	8.10 (1.15)	7.45 (1.25)	6.65 (1.40)	6.25 (1.49)	7.22 (1.29)	
1976/77	: 10.80	9.40 (1.15)	8.65 (1.25)	7.58 (1.42)	7.30 (1.48)	8.50 (1.27)	
1977/78	: 12.20	12.00 (1.02)	NA	8.48 (1.44)	8.20 (1.49)	9.50 (1.28)	
1978/79	: 14.20	13.55 (1.05)	12.50 (1.14)	10.13 (1.40)	9.80 (1.45)	11.00 (1.29)	
1979/80	: 15.50	15.00 (1.03)	13.25 (1.17)	11.20 (1.38)	10.90 (1.42)	11.75 (1.32)	
1980/81	: 16.93	16.65 (1.02)	14.45 (1.17)	12.50 (1.35)	12.00 (1.41)	12.90 (1.31)	

NA = not available.

1/ Price ratio of wheat to other grains are in parentheses.

2/ Average price for maximum and minimum quality grade of semihard and soft wheat.

3/ Average of feed and malting barley.

4/ See conversion rates, p. iii.

Source: (12).

Table 10--SENPA storing, financing, and handling charges, 1978/79

Grain	:	Storing	:	Financing	:	Handling 1/
	:	<u>Pesetas/mt per month</u>		<u>Percent</u>		
Barley	:	50	:	80	:	4
Corn	:	50	:	90	:	4
Oats	:	50	:	80	:	4
Rice	:	60	:	100	:	10
Rye	:	50	:	80	:	4
Sorghum	:	50	:	90	:	4
Wheat	:	40	:	100	:	5

1/ The handling charges are calculated as a percentage of the minimum or guaranteed price.

Source: (27).

other grains varies by province depending on the harvest period. There are three such periods:

- o Early harvest (August through March)--Alicante, Almería, Badajoz, Baleares, Cáceres, Cádiz, Córdoba, Granada, Huelva, Jaén, Las Palmas, Málaga, Murcia, Santa Cruz de Tenerife, Sevilla, Tarragona, and Valencia.
- o Middle harvest (September through April)--Albacete, Barcelona, Ciudad Real, Logroño, Madrid, Navarra, Cuenca, Gerona, Guadalajara, Huesca, Lérida, Salamanca, Toledo, Valladolid, Zamora, and Zaragoza.
- o Late harvest (October through May)--Alava, Avila, Burgos, Castellón, La Coruña, Guipúzcoa, León, Lugo, Orense, Oviedo, Palencia, Pontevedra, Santander, Segovia, Soria, Teruel, and Vizcaya.

SENPA also sets standards for all grains (see app. tables 6 and 7). This procedure consists of specifying minimum standards of acceptance as well as quality standards for calculating premiums and discounts.

Spanish grain policy is also heavily influenced by a dynamic livestock sector. Increasing demand for imported corn and soybeans, used principally in poultry and swine feed rations, has exacerbated Spain's agricultural trade deficit. This development has led to recent attempts to encourage the production of beef cattle. Spain is largely self-sufficient in poultry and pork production and is a net importer of beef. Spaniards feel that beef cattle can be fed with native forage

and pulses which would help to alleviate the balance of payments problems because of lower imports of corn, soybeans, and beef. These issues will be discussed further in the specific commodity policies.

Wheat

In the decade of the thirties, because of years of large wheat imports, Spanish policy greatly encouraged wheat production through high prices and substantial direct subsidies. Consequently, wheat was grown throughout Spain (even on irrigated and marginal land) much to the exclusion of other crops (32).

SENPA operates a monopoly over the buying and selling of all wheat. Current policy encourages production of feed grains at the expense of wheat although there is a research effort underway to improve the quality of breadmaking wheat in anticipation of EC entry. If the results of the research are successful, all Spanish soft wheat will qualify as breadmaking wheat in the EC which would bring a higher price (26).

There are over 90 varieties of wheat in Spain, mostly developed locally to adapt to the many microclimates that are the bane of Spain's agriculture. Allegiance to the crop has continued as farmers currently receive a fixed price for their production. All wheat production, except for that grown on irrigated land, is purchased by the Government.

Spanish wheat policy changed rapidly in the midsixties. Meat demand shifted upward as Spanish incomes rose dramatically. The resulting increase in feed grain demand was largely supplied through imports made possible by a more liberalized trade policy. As the demand for imported feed grains increased, Spanish policy began to favor domestic feed grains over wheat through high price regimes and other incentives (table 9). Barley became the most appropriate domestic feed grain to produce because of economic and climatic conditions; area planted to barley expanded spectacularly at the expense of wheat.

Farmers could switch easily from wheat to barley because of barley's adaptability to the wheat regions and because of the ready availability of wheat marketing channels. Barley is less of a risk than wheat since barley can be replanted if severe climatic conditions damage the early planting. Wheat area in the last 15 years has declined precipitously while barley area has risen dramatically (tables 11 and 12). Nevertheless, with guaranteed prices and improved technology, wheat production has increased the last decade because of increasing yields.

SENPA closely controls wheat sales but does not always physically handle it. SENPA employs four wheat purchase methods:

- o Direct purchase--This is done by mills and stores owned by SENPA in various locales.

- o Simultaneous buying and selling--SENPA credits the producer's account and debits the private trader's account.
- o Credit purchases--SENPA credits the producer's account with 90 percent of the total and then pays the balance when it calls for the wheat to be delivered.
- o Collaborating entities--Collaborating businesses such as private mills and warehouses are compensated for their independent purchasing, storing, and handling of wheat.

Table 11--Wheat area, production, and trade

Item	:	Area	:	Production	:	Imports	:	Exports
	:	1,000 ha	:		:	- - - 1,000 mt	:	- - -
All wheat:	:		:		:		:	
1960	:	4,233	:	3,520	:	84	:	10
1965	:	4,254	:	4,715	:	150	:	73
1970	:	3,755	:	4,125	:	1	:	414
1975	:	2,661	:	4,302	:	23	:	20
1978	:	2,752	:	4,806	:	227	:	162
1979	:	2,551	:	4,082	:	225	:	233
1980	:	2,698	:	6,039	:	305	:	239
Hard wheat:	:		:		:		:	
1960	:	NA	:	NA	:	NA	:	NA
1965	:	268	:	254	:	NA	:	NA
1970	:	143	:	126	:	NA	:	NA
1975	:	106	:	143	:	NA	:	NA
1978	:	89	:	177	:	NA	:	NA
1979	:	89	:	161	:	NA	:	NA
1980	:	97	:	241	:	NA	:	NA
Soft wheat:	:		:		:		:	
1960	:	NA	:	NA	:	NA	:	NA
1965	:	3,987	:	4,461	:	NA	:	NA
1970	:	3,612	:	4,000	:	NA	:	NA
1975	:	2,554	:	4,160	:	NA	:	NA
1978	:	2,663	:	4,629	:	NA	:	NA
1979	:	2,461	:	3,921	:	NA	:	NA
1980	:	2,601	:	5,798	:	NA	:	NA

NA = not available.

Source: (22).

SENPA purchased 81 percent of the wheat produced in the 1977-78 season. The remaining wheat was held on farms. ^{11/} Twenty-six percent of the wheat transactions were of the simultaneous buying and selling method, which is encouraged by SENPA; less than 2 percent was done by producer-miller contract.

Guaranteed fixed prices by wheat classification for the 1978/79-1980/81 buying periods were:

<u>Soft and semihard wheat</u>				<u>Hard wheat</u>			
<u>Grade</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>	<u>Grade</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>
	<u>Pesetas/mt</u>				<u>Pesetas/mt</u>		
I	15,000	16,100	17,600	I	18,300	19,500	20,750
II	14,500	15,600	17,600	II	17,000	18,500	19,750
III	14,000	15,150	16,650	III	13,650	15,000	16,400
IV	13,400	14,900	16,250				

Average prices received by producers were 15,410 pesetas/mt in 1979 and 16,750 pesetas/mt in 1980.

Hard wheat area and production are expected to expand once Spain is admitted to the EC. Hard wheat is used to make high quality bread and demand in the EC is relatively high.

Barley

The Government encouraged substitution of barley for wheat in the late sixties by raising the barley guaranteed price relative to wheat's. Additional aids for barley included fertilizer subsidies and a 20-percent subsidy for grain drying equipment. Barley area, production, and yields increased rapidly (table 12). Spanish grain policy is designed to decrease dependence on livestock feed imports, such as corn and soybeans, and increase the use of barley in feed formulas.

SENPA encourages consumption of domestic barley by setting relatively high threshold prices for imports of corn and barley. Guaranteed minimum prices and continued Government support for fertilizer use, grain drying equipment, and crop insurance are elements of SENPA's program. SENPA maintains a selling price differential between corn and barley based on nutritive feed value to help ensure domestic barley consumption. In 1980, the breakeven differential between corn and barley was estimated to be 1,500 pesetas/mt with corn at the higher level (12). The differential is usually set at a higher level than the breakeven point in order to ensure sale of all domestic barley.

FORPPA must buy all barley offered by producers at the guaranteed price. This obligation to purchase can cause severe strain on the market and incite vigorous Government

^{11/} Errors in official production estimates are included and generally overestimate the amount of wheat held on farms (27).

action to alleviate the stress. This was particularly true when SENPA was forced to buy over 2.5 million mt of barley in the 1978/79 season when ideal growing conditions generated a large domestic crop. SENPA then adopted extraordinary measures to increase consumption of domestic barley, including raising the threshold price for corn, lowering the SENPA sale price of feed barley, and allowing 30 days for payment. FORPPA proposed these measures to the Council of Ministers in Parliament which then issued a Royal Decree.

SENPA also encourages malting barley production. Increased consumption of domestic beer initially spurred malting barley production. As demand increased, the Government provided funds to research and monitor the quality of the grain. This funding led to the development of high-yield varieties that could also be used profitably as feed grains. Area and production of malting barley increased phenomenally in the seventies.

Table 12--Barley area, production, and trade

Item	Area	Production	Imports	Exports
	1,000 ha	- - 1,000 mt - -		
All barley:				
1960	1,428	1,562	62	--
1965	1,374	1,891	540	--
1970	2,224	3,103	6	20
1975	3,262	6,728	6	34
1978	3,519	8,068	2	3
1979	3,478	6,252	10	1
1980	3,575	8,705	554	--
Feed barley:				
1960	NA	NA	NA	NA
1965	1,308	1,809	NA	NA
1970	1,998	2,712	NA	NA
1975	2,075	3,882	NA	NA
1978	1,733	3,764	NA	NA
1979	1,865	3,103	NA	NA
1980	2,017	4,202	NA	NA
Malting barley:				
1960	NA	NA	NA	NA
1965	66	83	NA	NA
1970	227	391	NA	NA
1975	1,187	2,847	NA	NA
1978	1,786	4,304	NA	NA
1979	1,613	3,149	NA	NA
1980	1,557	4,503	NA	NA

NA = not available.

-- = Less than 500 mt.

Source: (22).

For the 1978/79-1980/81 marketing years, guaranteed prices for malting barley were 10,250, 11,400, and 12,700 pesetas/mt compared to 10,000, 11,000, and 12,300 pesetas/mt for feed barley. The threshold price for 1979/80 imported barley was 13,600 pesetas/mt. Average prices received by all barley producers were 11,530 pesetas/mt in 1979 and 12,640 pesetas/mt in 1980.

Corn

Spain strongly encourages corn production for livestock feed through a variety of incentives to lessen dependence on imports. Spain's climate and topography, however, combine to thwart attempts to increase corn production to meet domestic demand. Lowland areas of Spain are generally too dry for corn cultivation, and most of the mountainous areas are too cold. Nevertheless, the Government does subsidize production and investment in varietal research.

Government incentives to increase corn production consist of a minimum guaranteed price considerably higher than the threshold price for corn, special aid for storing and drying facilities, and low-interest loans (up to 12,000 pesetas per hectare in 1978/79) for seeds, fertilizer, and herbicides. The Government also insures all spring grains (corn is a spring grain) against hail and fire damage. The result has been more than a doubling of corn yields from 1960-79, although area has remained about the same (table 13). Hybrid corn area rose from 30 percent in 1960 to over 79 percent of total corn in 1979 (12). In 1950, no hybrid corn was planted.

The guaranteed minimum price was set at 13,500 pesetas/mt compared to a threshold price of 12,400 pesetas/mt for the 1978/79 season. 12/ During this period, the variable levy

12/ The Government subsidized feeding of domestic corn.

Table 13--Corn area, production, and trade

Item	Area	Production	Imports	Exports
	1,000 ha	- - - -	1,000 mt	- - - -
1960	461	1,012	68	--
1965	478	1,142	1,560	--
1970	539	1,848	1,972	7
1975	485	1,794	4,182	2
1978	443	1,969	4,359	2
1979	467	2,217	4,370	1
1980	455	2,314	5,533	1

-- = Less than 500 mt.

Source: (22).

fluctuated widely, from 1,683 to 3,340 pesetas/mt because of the changing international price. Spain will continue corn subsidies in order to lessen dependence on grain imports. The 1979/80 and 1980/81 guaranteed prices were set at 15,000 and 16,650 pesetas/mt. The threshold prices for the same years were 13,500 and 14,200 pesetas/mt. Average prices received by producers were 14,060 pesetas/mt in 1979 and 15,520 pesetas/mt in 1980.

Private importers make all purchases of imported corn. Imports have increased considerably over the past two decades and domestic production, while increasing significantly, has not kept pace with imports. The dominance of imports is due to the agronomic conditions already cited which restrict corn production to a region in the north-central part of Spain and to the fact that corn is usually grown on irrigated land and net returns to other irrigated crops are higher.

Sorghum

Sorghum, a relatively new crop in Spain (introduced in 1959), is a hybrid crop and is grown under the same general conditions as corn, although it is more resistant to drought, heat, and salinity but less resistant to frost. Both are used for the same feeding purposes although sorghum requires more feed supplements.

Domestic production of corn and sorghum has increased substantially and so have imports of both because of the continuing demand for livestock feed (table 14). Sorghum area growth has stagnated recently for the same reasons as corn: competition with other more profitable irrigated crops and difficult agronomic conditions.

The similarity of sorghum and corn has led FORPPA to devise the same basic policy for both crops. Sorghum producers are given special low rate loans on grain dryers, herbicides, and fertilizer, and are covered by Government crop insurance against

Table 14--Sorghum area, production, and trade

Year	Area	Production	Imports
	1,000 ha	- - 1,000 mt - -	
1960	1	1	--
1965	20	43	43
1970	47	190	184
1975	35	144	530
1978	54	284	517
1979	43	215	476
1980	38	186	666

-- = Less than 500 mt.

Note: There have been no sorghum exports.

Source: (22).

flood and fire. A threshold price and minimum guaranteed price are also set each year for sorghum. The threshold price for the 1978/79 season was 11,450 pesetas/mt and the variable levy fluctuated between 396 and 2,771 pesetas/mt. In 1979/80, the threshold price was 12,700 pesetas/mt. Minimum guaranteed prices were set at 13,250 pesetas/mt for 1979/80 and 14,450 pesetas/mt for 1980/81. Like corn, sorghum is also imported by private traders and domestic production has not kept pace with demand which has led to high import levels.

Oats

Oats have been used principally for feeding draft animals. Mechanization has increased dramatically, thus reducing the demand for draft animals. However, oats are also needed as a livestock starter feed. With the expansion of the livestock sector, demand has increased sufficiently to more than offset the loss due to the declining number of draft animals (table 15). An estimated 43 percent of the oat crop is used for on-farm feeding (24).

Spanish policy supports domestic production of oats in much the same manner as other grains with guaranteed prices, finance and storage payments, loans for fertilizer and seeds, and a crop insurance program. The 1978/79-1980/81 guaranteed minimum prices were 9,600, 10,600, and 11,700 pesetas/mt, respectively.

Oats will continue to be supported to some degree by Spanish policy because the crop is used in rotation with wheat and is valuable as a starter feed. However, since oat yields are relatively low and because oats are only economically useful as a starter feed, they will not likely replace other grains.

Rye

Rye in Spain is generally produced on high, cold, dry plateaus where no other cereals can be produced profitably. Poor soil holds down yields. Rye is the cereal most resistant to cold

Table 15--Oats area, production, and trade

Year	Area	Production	Imports	Exports
	1,000 ha		1,000 mt	
1960	556	431	1	--
1965	562	370	--	--
1970	473	393	--	68
1975	457	609	--	--
1978	442	553	--	2
1979	436	456	--	4
1980	458	680	--	4

-- = None reported over 500 mt.

Source: (22).

Table 16--Rye area and production

Year	:	Area	:	Production
	:	<u>1,000 ha</u>	:	<u>1,000 mt</u>
1960	:	509	:	385
1965	:	393	:	349
1970	:	313	:	259
1975	:	228	:	241
1978	:	228	:	251
1979	:	220	:	221
1980	:	217	:	284

Note: There have been no rye exports. Spain imported 2,000 metric tons of rye in 1965.

Source: (22).

weather; consequently, some rye will be grown, given current and expected price relationships.

Rye is used principally as a feed grain, although it is often used as green forage. It is not useful as straw for animals because of low absorbency capacity, but it is useful in making straw hats, baskets, and other similar products. Barley has recently taken over some of the marginal land previously planted to rye because it is more useful as a feed grain and has higher yields. Improved barley varieties can withstand some of the difficult growing conditions. Rye acreage has dropped precipitously since 1960 (table 16).

Spanish policy is basically the same for rye as for other feed grains. Guaranteed prices of 11,000, 11,750, and 12,900 pesetas/mt were offered for the 1978/79-1980/81 seasons. Target prices were set at 12,900 pesetas/mt for the 1979/80 season and 13,300 pesetas/mt for 1980/81. The 1980/81 price was the first time that the barley target price (14,000 pesetas/mt) was set higher than the target price for rye. This indicates that barley will continue to replace rye in marginal growing areas.

Rice

Spain has been a large rice producer and exporter during most of this century (table 17). Spain would have been a larger exporter if Great Britain had not turned to Burma in 1933 for rice and ceased to import from Spain (32). Rice exports now depend on Government subsidies.

The Government encourages rice production through guaranteed prices, storage and finance payments, and payments to producers for transportation costs (derivation payments). Derivation

Table 17--Rice area, production, and trade

Year	Area	Production	Exports
	<u>1,000 ha</u>	<u>- - 1,000 mt - -</u>	
1960	66	361	29
1965	59	350	84
1970	64	382	70
1975	62	379	43
1978	68	401	48
1979	69	427	50
1980	68	433	57

Note: There were no rice imports.

Source: (22).

payments vary according to production region to compensate for distance to milling centers. Because of consistent Government support, Spanish rice yields have been among the world's highest. Domestic consumption is also encouraged through upper intervention prices.

FORPPA regulates the rice market through SENPA. Guaranteed prices for the five classes of rice produced in Spain for the 1978/79-1980/81 seasons ranged from 17,500, 20,100, and 21,700 pesetas/mt for long rice to 13,900, 16,000, and 17,300 pesetas/mt for Type IV Round, Semi-long rice. The most common rice--Type II, Round, Semi-long--had guaranteed prices of 15,000, 17,250, and 18,650 pesetas/mt for the 1978/79-1980/81 seasons. Derivation payments for the 1978/79 season were 150 pesetas/mt in Seville, 500 pesetas/mt in Valencia, and 350 pesetas/mt in Tarragona. The average price received by producers was 18,410 pesetas/mt in 1979 and 20,920 pesetas/mt in 1980 for unmilled rice.

The 1978/79 threshold price for common rice imports was set 75 percent above the guaranteed price for common Type II rice. The threshold price also included storing and financing costs. A rice surplus of 90,000 mt was accumulated in the 1978/79 season from previous stocks and because the 1978/79 crop was very good. Measures were taken to export up to 60,000 mt of milled rice and store 30,000 mt of paddy rice. A maximum export restitution of 4,250 pesetas/mt was set for milled rice up to 15,000 mt and 4,000 pesetas/mt for paddy rice up to 510 mt.

Because salinity caused by irrigation renders riceland unsuitable for other crops, the Government will likely continue to aid rice producers so that area and production will remain stable. This continued aid will help Spain expand rice exports to markets in Western Europe after Spain joins the EC. Such

aid to rice production will also help alleviate Spain's unemployment problem because rice is a labor-intensive crop.

Oilseeds and Vegetable Oil Policy

A complicated agricultural policy issue currently facing Spain concerns the relationship of competing vegetable oils: one processed from imported soybeans and the other processed from domestically produced olives. Large quantities of soybeans must be imported to provide adequate protein feed for a steadily growing livestock sector. Such imports contribute to a balance of payments problem for Spain. More importantly, the imports have led to production of large quantities of soybean oil which, if sold on the domestic market, would compete directly with olive oil. Spanish crushers opened two new processing plants in 1980 which have increased domestic availability of soybean oil.

The Spaniards believe that olive production and olive oil sales must be protected in order to maintain employment levels, provide a minimum income for low-income farmers, and maintain olive trees as an ecological measure. Recent Spanish policy protects olive oil consumption by restricting consumption of soybean oil. However, the olive oil consumer price has been set higher than sunflower oil and soybean oil prices. The olive oil price is apparently set so high that pure olive oil is used almost exclusively for salad dressing and infrequently as a cooking oil, except in combination with other vegetable oils.

Soybeans

The importance of soybeans as a protein source for Spanish poultry and swine production has led to sharp increases in Spanish imports of soybeans and soybean meal. This development in domestic consumption has alarmed Spanish policymakers because of the fear of a growing dependency on a foreign-grown crop.

Attempts to encourage soybean production in Spain have largely failed because of unsuitable climate and soil. Spanish policy encourages soybean production as a first crop where climatic conditions permit and as a second crop where possible. However, soybeans must compete on irrigated land with other more profitable crops. Imports have consequently increased to meet feed demand while domestic production has stagnated at insignificant levels (table 18).

Soybean oil production increased dramatically as Spain increased its crushing capacity like the northern European countries. But, there has been a complicated policy designed to encourage soybean production without increasing soybean oil consumption which competes with olive oil. This policy was developed because olives are an important established crop and are frequently the only viable cash crop in some regions. Domestic soybean oil sales are thus limited to 25,000 mt per quarter in order to protect olive oil sales. This policy has caused Spain to become an important exporter of soybean oil since the domestic market is limited by the quota on sales. Soybean oil exports have become Spain's third leading agricultural export by value (22).

Table 18--Soybean area, production, and trade

Year	Area	Production	Imports	Oil exports
	1,000 ha		- - 1,000 mt - -	
1965	NA	NA	340	1
1970	2	3	1,230	86
1975	8	14	1,737	41
1978	9	17	2,179	272
1979	9	15	2,237	311
1980	7	14	3,208	369

NA = not available.

Source (22).

A maximum retail price on soybean oil is also set. This price was 90 pesetas/liter in July 1980 compared to an olive oil price of 130 pesetas/liter. The low soybean oil price leads to inadequate refining, resulting in poor quality soybean oil entering the export market. Producers are concerned that this could become a stigma that will remain even if future soybean oil prices allow for adequate refining. This concern could become more important once Spain becomes a member of the EC and attempts to market soybean oil within Community borders.

A soybean producer receives an "average market price" determined by FORPPA through a rather complicated formula involving the Chicago Board of Trade closing prices, freight and handling costs, average variable levies, and an average peseta/dollar exchange rate. A subsidy in the form of a deficiency payment is granted if this average market price drops below the target price. The target price for soybeans of a round commercial grade, a maximum of 2-percent undesirable material, a 13-percent moisture maximum, and an 18-percent maximum oil content for beans placed at the crushing facility was 31,000 pesetas/mt from September 1, 1980, to August 31, 1981. Soybean seeds for planting are subsidized at 50 percent of cost.

Trade in soybeans is liberalized and private traders make all purchases. There is no import duty on soybeans, but there is a compensatory tax of 5.5 percent. For soymeal, there is a 2-percent duty and a 6.5-percent compensatory tax. Soybean oil has a 9-percent duty and an 8.5-percent compensatory tax. The compensatory tax is based on the c.i.f. price plus unloading and duty.

Olives

Use of olive oil in cooking was not common until the Spanish Civil War (1936-39), although its use as an oil dressing is centuries old. From the time of the war until 1960, a distribution scheme for surplus olive oil led to increased consumption because everyone in Spain received a substantial ration and had to use it for something other than an oil dressing. Spaniards eventually learned to cook with it and became

accustomed to the taste. Prices were artificially low during this period, which led to improper pruning practices, poor methods of pest control, and inadequate application of fertilizer, all of which contributed to lower yields (32).

Consumers preferred olive oil for cooking when rationing ended in 1960 and prices rose dramatically, partly due to collusion among some growers (32). This led to Government intervention, taking the form of lowered duties on imported oilseeds and vegetable oils (soybean and sunflower). The olive oil stock kept off the market by growers in order to drive prices higher was then added to the increased imports of vegetable oils which then led to a surplus of olive oil. This development contributed to the protective policy designed for olive production and oil sales in order to maintain employment levels and incomes and prevent soil erosion.

Over 2 million hectares of nonirrigated land not useful for other crops are devoted to this relatively labor-intensive permanent cash crop (olive trees bear fruit for over 200 years). ^{13/} The crop provides 200,000 families and 2 million workers, mainly in Andalusia, with a source of income (26). Government policy is consequently designed to protect olive production and sporadic surpluses have continued.

Government policy also aims to improve the yield and quantity of olives and olive oil while reducing total area. A proposed Government policy would reduce olive area to 1.75 million hectares by the year 2000 while maintaining production levels. Smoothing out production figures is particularly difficult since a 25-percent annual fluctuation in yields is not unusual due to growth and disease cycles (table 19). Subsidies totalling 70 million pesetas were granted to olive growers in the 1978 season in order to induce the replacement and/or improvement of olive groves.

Aside from attempts to increase yields and quality of olives while decreasing area, an elaborate Government scheme has evolved to protect producers from low prices and consumers from high prices. (The quota on soybean oil sales to protect olive oil consumption has already been discussed in the section on soybeans.) Smooth regulation of the market is difficult, but FORPPA is prepared to purchase the necessary amount to prop up the market price. In 1978, these purchases amounted to 4 million pesetas of olive oil and stocks accumulated to 200,000 mt.

Further market regulation is accomplished with the use of an upper intervention price, a reference price, and a guaranteed minimum price at which FORPPA must purchase all olive oil offered. The reference price is the average price on major markets in the country. When the reference price reaches the upper intervention price, Government stocks are released. In

^{13/} Recently, however, sunflowers and almonds have begun to replace some olive groves.

Table 19--Olive area, production, and trade

Year	Table olives			Oil olives			
	Area	Production	Exports	Area	Production	Oil production	Oil exports
	1,000	1,000		1,000			
	ha	mt		ha	mt		
1960	NA	68	57	NA	2,298	464	139
1965	74	59	41	2,283	1,605	324	26
1970	122	78	67	2,189	2,117	434	179
1975	161	170	62	2,047	2,187	455	48
1978	167	175	81	1,978	2,606	500	81
1979	165	162	89	1,967	2,138	433	109
1980	152	141	97	1,962	2,114	446	122

NA = not available.

Source: (22).

order to prevent the necessity of buying or selling olive oil, FORPPA can either provide or withdraw storage loans on the basis of the relationship between the reference price and the arithmetic mean between the intervention price and the guaranteed minimum price.

There are also monthly increments to the upper intervention and the guaranteed prices designed to stagger sales. In 1979, monthly storage payments of 500 pesetas/mt were offered from February through April and 790 pesetas/mt from May through July; these payments were increased to 1,250 and 1,500 pesetas/mt, respectively, for the same time periods in 1980. In 1979, a direct subsidy of 7 pesetas/liter of olive oil was paid to producers; this was raised to 10 pesetas/liter in 1980. Guaranteed prices for Extra Fine Virgin oil (acidity to 5 percent) delivered to reception centers from December 19 to July 31 were 106, 116, and 126 pesetas/liter in 1978, 1979, and 1980, respectively. Average prices received by producers for olive oil were 104.35 pesetas/kilo in 1979 and 116.51 pesetas/kilo in 1980.

Sunflowers

Spanish policy encourages sunflower production in order to reduce dependence on oilseed imports and provide a domestic source of protein meal for livestock. With encouragement from the Government in the form of a guaranteed price, storage payments, and financial arrangements, sunflower area and production have increased spectacularly (table 20). Sunflowers have also replaced some olive groves since they can be grown under the same conditions and net returns are higher.

Guaranteed prices for sunflowers were 24,500, 27,500, and 30,000 pesetas/mt in the 1978/79-1980/81 seasons with a 300-peseta/mt monthly increment for storing and financing from

Table 20--Sunflower area, production, and trade

Year	Area	Production	Oil imports	Oil and meal exports
	1,000 ha		1,000 mt	
1960	4	2	9	--
1965	11	9	30	--
1970	166	159	6	1
1975	792	416	76	2
1978	584	470	83	26
1979	638	504	23	31
1980	668	492	22	26

-- = Less than 500 mt.

Source: (22).

November 1 to April 30. A consumer protection price (a maximum retail price) of 90 pesetas/liter was in effect for the 1978/79 season and was subsequently raised to 108 pesetas in 1979/80 and 119 pesetas in 1980/81.

Spain imports sunflower oil because it is considered superior to olive oil and soybean oil as a cooking oil. Large fluctuations in domestic sunflower production may determine to some extent whether or not sunflower oil will be imported. Sunflower oil imports are not taxed because there is a market for sunflower oil independent of olive oil, the size of which is not a danger to olive oil consumption. Another reason for free duty entry is the Government's attempt to provide consumers with a low-priced, high-quality oil.

Livestock Policy

Spanish livestock and poultry policy, in combination with its feed grain policy, has generated dramatic production increases of poultry, swine, beef, and rabbits (tables 21 and 22). Slaughter numbers and total slaughter weight have increased more rapidly than flock or herd size (table 21). The offtake rates from 1960 to 1979 increased from 0.50 to 1.20 for swine. The beef cattle offtake rate climbed from 0.51 to 0.66. The rate for sheep rose from 0.47 to 0.75. ^{14/}

Poultry production rose so rapidly that Spain was able to export over 8,000 mt of broilers in 1979 after having been a net importer in the early sixties. Rabbit production increased most spectacularly and was almost equal to the combined production of sheep and lamb meat in 1980. Animal products such as milk and eggs increased concurrently as a result of the emphasis on livestock production.

^{14/} Offtake rate is the number of animals slaughtered divided by herd size. These figures are calculated from tables 23, 24, 27, 28, 31, and 32.

Table 21--Percentage change in livestock herd size, slaughter numbers, and slaughter weights, 1960-79

Item	Beef	Swine	Poultry	Sheep	Goats	Rabbits
	<u>Percent</u>					
Herd size	22	75	NA	-39	-40	NA
Slaughter numbers	56	325	139*	-4	-9	1,900
Slaughter weight	146	264	219*	11	-8	2,120

*1965-79

NA = not available.

Source: (22).

Table 22--Livestock slaughter numbers and weights

Year	Beef	Pork	Poultry	Sheep	Goats	Rabbits
	<u>1,000 head</u>					
Numbers:						
1960	1,118	2,986	NA	10,663	1,392	4,066
1965	1,143	2,957	305,500	10,808	1,258	18,055
1970	1,666	6,024	343,000	11,532	1,412	20,284
1975	2,038	8,031	461,514	11,701	1,346	83,076
1978	1,775	10,952	504,002	11,001	1,431	81,087
1979	1,744	12,683	490,643	10,284	1,267	81,298
1980	1,907	13,198	506,929	10,877	1,356	89,997
	<u>1,000 mt</u>					
Weights:						
1960	160	258	13	109	12	5
1965	177	267	234	122	12	18
1970	308	492	499	127	13	25
1975	454	602	631	136	12	44
1978	391	803	755	130	13	111
1979	394	939	747	121	11	111
1980	422	986	771	127	11	118

Source: (22).

Spanish livestock and poultry policy over the past two decades has encouraged replacement of native animal breeds and traditional feeding methods with improved breeds from other countries and intensive feeding systems. Intensive feeding of concentrates came as a result of Spain's policy of allowing imports of corn and soybeans and offering inducements to expand domestic feed grain production, particularly barley. Introduction of superior animal breeds and modern health practices has been widely sponsored and financed through special Government loans.

Government market manipulation in favor of more efficient methods of meat production helped to render traditional methods of production and marketing noncompetitive. For example, premiums were awarded for ideal slaughter weights that favored new breeds of meat animals. Guaranteed minimum prices were set at levels that largely precluded competitive marketing of many traditional native breeds. Control of the domestic market was further enhanced by Government control of meat and live animal imports and exports.

Implementing these policies in a coordinated fashion has led to lower production costs per unit in real terms. The tremendous increases in meat production have led in some cases to lower consumer prices in real terms. These lower prices, in combination with higher incomes, have resulted in a substantial increase in meat consumption in Spain. In 1964, meat consumption per year was 55 pounds per capita; by 1978, per capita meat consumption per year had increased to 148 pounds. Pork and poultry are the leading sources of the meat supply (table 22).

Cattle

A wide range of projects that affect beef and milk production have been instituted by FORPPA and the World Bank (through the Agencia de Desarrollo Ganadero--Agency for Cattle Development). The principal long-term goal of these projects is to attain self-sufficiency in beef and dairy production without producing surplus milk. Programs include improvement of pasture, feeding of agro-industrial byproducts, financial aid to import superior breeds, widespread availability of artificial insemination, development of forage feeds, and increased use of concentrated feeds (26).

A cash premium program for increased slaughter weights that had been in effect since the sixties was terminated in 1977 after substantial increases in cattle carcass weights were realized. Results of these programs are evident in tables 23 and 24. All slaughter weights have increased significantly and calf and yearling numbers have also increased. The number of imported cows for breeding has also increased substantially at the expense of native cows (table 25).

FORPPA has instituted a price regime that attempts to regulate the production of beef and veal in order to attain self-sufficiency. A price regime is set for each category of slaughter animal and includes minimum guaranteed prices, lower intervention prices, target prices, and upper intervention prices. When the reference price reaches the lower intervention price, FORPPA buys, freezes, and stores the meat and increases the threshold price of imports. When the reference price rises to the level of the upper intervention price, stocks are released and threshold prices reduced in order to increase supply and moderate prices.

The price regimes have to contend with international and domestic cattle cycles that disrupt the domestic market. The

Table 23--Cattle herd and slaughter numbers

Year	Total herd	Milk cow herd	Calf herd	Other	Total slaughter
			<u>1,000 head</u>		
1960	3,640	1,465	714	1,461	1,118
1965	3,712	1,508	786	1,418	1,143
1970	4,282	1,827	995	1,460	1,666
1975	4,335	1,811	1,085	1,439	2,038
1978	4,601	1,950	1,146	1,505	1,775
1979	4,469	1,810	1,165	1,494	1,744
1980	4,495	1,852	1,169	1,474	1,907

Source: (22).

Table 24--Cattle slaughter numbers and weights

[illegible]

NA = not available.

Source: (22).

Table 25--Imported and native breeding cows

	:	:
Year	:	Native Imported
	:	
	:	<u>1,000 head</u>
	:	
1955	:	1,261 442
1970	:	1,431 879
1974	:	1,015 1,300
1978	:	930 1,582
	:	

Source: (22).

problem is further complicated by a lack of frozen storage space and poor quality of frozen meat. These problems have made market coordination difficult. In addition, compliance with the price regimes by slaughterhouses has reportedly been uneven (1).

The threshold price is set at 98 percent of the upper intervention price. The following price regulations were in effect in 1980 and 1981 for the most common beef carcass:

<u>Standard carcass</u>	<u>Price</u>	<u>1980</u>	<u>1981</u>
		<u>Pesetas/kilo</u>	
Yearling calf	Guaranteed	220	233*
	Lower intervention	235	249*
	Target	270	286**
	Upper intervention	290	307**

* Yearling, second-grade quality

** Yearling, first-grade quality

Average liveweight prices received by producers for a 5-month-old calf were 171.98 pesetas/kilo in 1979 and 166.64 pesetas/kilo in 1980. Prices for a yearling from 1-2 years old were 140.67 pesetas/kilo in 1979 and 135.44 pesetas/kilo in 1980. Prices for adult cattle were 77.77 pesetas/kilo in 1979 and 65.79 pesetas/kilo in 1980.

FORPPA can also intervene in depressed rural areas if producer prices are low enough to cause distress slaughter. This intervention can occur even when the official reference price for beef is above the lower intervention price. FORPPA can also petition the Government for permission to intervene in the beef (also swine and sheep) market when special circumstances affect producer costs. The most common factor leading to such an intervention is a rise in price levels of feeds.

A multifaceted program, initiated in 1978, was designed to reduce reliance on imported feeds and increase resource use in Spain. The program emphasizes improved pasture management, increased forage crop production, increased imports of foreign cattle breeds and machinery, more feedlots, and greater use of prolific native heifers. Government credit of over 3.8 billion pesetas (U.S. \$50 million) was made available in 1978 for these projects with substantial aid coming from the World Bank.

Dairy

Objectives of Spanish dairy policy are to increase dairy farmer incomes, provide an adequate supply of milk and milk products to consumers without excessive surpluses, open up the domestic market to international competition with a minimum of protection, conform to EC methods of regulation of the dairy sector, and restructure inefficient dairy farming in Galicia (26). Programs aimed at increasing the efficiency of milk production include

Government vaccination programs, special aid for construction of milk barns and feed silos, and special loans for manure disposal units and milking machines.

Quality control and classification of milk products are comprehensively covered by Government regulation. Retail milk prices are strictly controlled. Costs of collecting and transporting are added to fixed processing, distributing, and wholesaling margins to ensure that prices to the consumer are not exorbitant. Licensed central receiving stations facilitate price controls and hygienic regulations. A guaranteed minimum price to producers and quality and transport premiums complement the entire system. The combination of the regulations, classification system, improved breeds, incentive programs, and price regime has helped to more than double the quantity of milk produced from 1960-79 (table 26). Herd size increased by only 24 percent in that period, indicating much higher yields. The same does not hold true for sheep and goat milk, production of which has declined because of the emphasis on cow's milk.

Producer prices for milk are subject to upper and lower intervention prices with a reference price triggering intervention. These prices are subject to premiums and discounts depending on the quality of the milk. Transport premiums are added to producer prices in deficit regions. In 1978/79, provincial prices differed by as much as 1.75 pesetas/liter depending on distance from the nearest processing centers.

Prior to September 1978, a 6-month price system had been in effect. Since that time, the prices set in January remain the official prices through September of that year. Another price is then set for Oct.-Dec. This pricing scheme was instituted primarily to conform to the EC system. The prices for the

Table 26--Cowmilk production and use

Year	Milk : cows	Total : pro- duction	Liquid : con- sumption	Butter : consump- tion	Cheese : consump- tion	Condensed : milk	Powdered : milk
	: 1,000						
	: head	- - - - -	- - - - -	- - - - -	Million liters	- - - - -	- - - - -
1960	: 1,465	2,602	1,569	104	137	99	21
1965	: 1,508	3,278	1,722	107	205	121	60
1970	: 1,827	4,322	2,310	466	201	216	132
1975	: 1,811	4,984	3,062	177	651	240	121
1978	: 1,950	5,560	3,606	NA	NA	NA	NA
1979	: 1,810	5,661	3,529	NA	NA	NA	NA
1980	: 1,852	5,871	3,787	NA	NA	NA	NA

NA = not available.

Source: (22).

1978/79 year were 18.0, 18.4, and 18.5 pesetas/liter for minimum, target, and upper intervention prices, respectively. For 1980, these prices were set at 20.0, 20.4, and 20.5 pesetas/liter from Jan-Sept. and 21.25, 21.65, and 21.75 from Oct-Dec. Average prices received by producers for cow's milk were 19.41 pesetas liter in 1979 and 21.22 pesetas/liter in 1980.

In cases of surplus production, private registered receiving centers are granted authority to process milk into butter or powdered milk at the minimum price at Government expense. Under such circumstances, the minimum price does not necessarily act as a guaranteed price since processors are not obligated to buy all milk of a given quality at that price. Export restitutions can also be offered as well as premiums for denatured milk. In the 1978/79 season, 8,500 mt of powdered milk and 3,100 mt of butter were produced as a result of a milk surplus. When the reference price is higher than the upper intervention price, stocks can be released and imports of fresh milk, powdered milk, and cheese might be allowed.

The Canary Islands, comprising the Spanish provinces of Las Palmas and Santa Cruz de Tenerife, have a special program which insures that pasteurized fluid milk is competitive with less expensive imported powdered milk. Special promotion of group dairy farming in mountain regions is also aided by a Government program.

Swine

Spanish swine slaughter numbers have tripled in the last 20 years while herd size increased only 75 percent. This large production increase was made possible by a dramatic structural transformation from extensive to intensive production characterized by the adoption of modern feeding methods, better health practices, the introduction of superior breeds, and a price regime that reinforced a policy designed to increase offtake rates. Production of younger, leaner animals for slaughter has resulted, as indicated by slaughter numbers which have increased faster than slaughter weights and by the rapid increase in the slaughter of 6-month old animals or younger compared to the decreased slaughter of older animals (tables 27 and 28).

Before 1977, Spanish policy included price premiums for ideal slaughter weights which favored a younger, leaner animal over the traditional heavier, fatter, and older animal. Rapid weight gain through intensive feeding of concentrates to crossbreeds of native Iberian stock with foreign stock was the most efficient method available to produce the new slaughter animal.

More rapid growth might have been possible but for the presence of African Swine Fever (ASF), a disease that has infected the Spanish herd for years and precludes most swine exports. Farmers are compensated by FORPPA for animals destroyed because of ASF. Special loans have been granted

Table 27--Swine numbers

Year	Age				
	Total	0-2	2-6	6-12	More than
	number	months	months	months	12 months
			<u>1,000 head</u>		
1960	6,032	NA	1,669	1,779	2,584
1965	4,931	NA	1,673	1,479	1,779
1970	7,621	1,862	3,042	1,847	869
1975	8,662	2,178	3,939	1,612	934
1978	10,496	2,662	4,955	1,733	1,146
1979	10,531	2,641	5,280	1,490	1,120
1980	11,263	2,947	5,528	1,607	1,181

NA = not available.

Source: (22).

Table 28--Swine slaughter numbers and weights

Year	Total	Total	Average
	slaughter	weight	Weight
	<u>1,000 head</u>	<u>1,000 mt</u>	<u>Kilos</u>
1960	2,986	258	86.4
1965	2,957	266	90.0
1970	6,024	492	81.7
1975	8,031	602	75.0
1978	10,952	803	73.4
1979	12,683	939	74.1
1980	13,198	986	74.1

Source: (22).

for the creation of "closed cycle units" where breeding and fattening occur in one location. This prevents the spread of ASF by making it unnecessary to transport piglets.

Prices are strictly regulated, although it appears that slaughter houses do not always honor guaranteed prices (1). Prices for a common swine carcass have been:

<u>Price</u>	<u>1978/79</u>	<u>1979/80</u>
	<u>Pesetas/kilo</u>	
Guaranteed	114	119
Lower intervention	121	126
Target	128	134
Upper intervention	134	142

Average liveweight prices received by producers for a finished feeder hog were 95.98 pesetas/kilo in 1979 and 92.66 pesetas/kilo in 1980. Lower intervention prices are hard to maintain because ASF prevents other countries from importing Spanish pork. Inability to control ASF also inhibits investment in the swine industry (1).

SENPA is responsible for market regulation and for purchases of pig meat for storage when the reference price falls below the lower intervention price. However, poor storage facilities hamper the effectiveness of market intervention. When the reference price is above the upper intervention price, stocks are released or imports effected. SENPA may initiate action to force the reference price towards the target price when the reference price is above or below the target price.

Poultry and Eggs

Intensive feeding practices have been primarily responsible for increases in poultry meat production while importation of hybrid chicks for layers has led to sharp increases in egg production. Emphasis on the use of broilers in poultry meat production has helped improve performance in terms of weight gain and slaughter numbers (table 29). However, intensive use of compound feeds for broilers has resulted in even larger imports of corn because poultry is the largest consumer of imported feed grain. Spanish net broiler trade, valued at 257 million pesetas in 1979, helped offset some imported feed requirements (22).

An elaborate system of market regulation protects producers and consumers from widely fluctuating prices of poultry meat and eggs. A basic intervention price is established that serves as a floor price for producers; a maximum consumer price is set to protect consumers. A lower intervention price is then calculated at 5 percent above the basic intervention price and an upper intervention price is set at 98 percent of the maximum consumer price.

When the reference price drops below the lower intervention price, FORPPA can finance payments for storage and grant export restitutions. When the reference price falls below the basic intervention price, contracts for the subsidized processing of poultry may be used by FORPPA, and/or increased export restitutions may be offered. When the reference price rises to the consumer protection price, stocks are released and/or imports are allowed (table 30).

Regulation of the egg market operates in the same manner as for poultry meat. Processing and storage are easier to manipulate because handling costs are much lower.

Average liveweight prices received by producers for broilers were 81.37 pesetas/kilo in 1979 and 79.47 pesetas/kilo in 1980. The average liveweight producer price for hens was 52.74 pesetas/kilo in 1980. Average producer prices received for 1 dozen eggs were 54.78 pesetas in 1979 and 65.09 pesetas in 1980.

Table 29--Poultry and egg production

Year	: Broiler slaughter		: Other slaughter		: Egg
	: Average	: Average	: Average	: Average	: production
	: Number	: weight	: Number	: weight	:
	: 1,000		: 1,000		
	: head	Kilos	: head	Kilos	Millions
1960	: NA	NA	10,201	NA	3,608
1965	: 163,700	1.1	41,800	1.3	5,820
1970	: 300,000	1.4	NA	NA	8,134
1975	: 419,014	1.3	42,500	1.7	10,074
1978	: 461,502	1.5	42,500	1.7	10,044
1979	: 448,143	1.5	42,500	1.7	11,003
1980	: 458,221	1.5	42,500	1.7	11,696
	:				

NA = not available.

Source: (22).

Table 30--Price regime for poultry and eggs

Price	1977/78	1978/79	1979/80	1980/81
	Pesetas per kilo			
Poultry meat: 1/				
Basic intervention	67	77	89	95
Lower intervention	72	82	95	103
Target	79	87	101	110
Upper intervention	81	90	108	120
Consumer protection	83	92	110	NA
	Pesetas per dozen			
Eggs: 2/				
Basic intervention	37	44	58	53
Lower intervention	42	49	55	58
Target	47	54	61	65
Upper intervention	49	56	64	73
Consumer protection	50	58	66	NA

NA = not available.

1/ Class A chicken carcass with head and feet.

2/ Type A, fourth class.

Source: (12).

Poultry and egg trade is controlled by the Government. The domestic market can be insulated from world market conditions because Spain is self-sufficient in both commodities. Intervention in the market is, therefore, infrequent compared to other commodities.

Sheep

The Spanish sheep flock has declined by 40 percent over the past 20 years, largely due to increased competition from poultry and swine production and consumption (table 31). Production costs have also increased relative to other livestock because of a lack of manpower (shepherds) and because sheep are not as efficient as poultry and swine in utilizing concentrated feeds. Nevertheless, higher average slaughter weights and offtake rates have led to increased total slaughter weight largely due to a weight premium program (table 32).

FORPPA has offered premiums for higher slaughter weights of sheep and lambs since 1960 and has offered even higher premiums since 1972. These weight premiums have increased average slaughter weights of all categories. These results have come chiefly from a combination of intensive and extensive feeding programs. In 1978, the weight premiums paid by FORPPA amounted to 472 million pesetas and were available as follows:

- o 259 pesetas/kilo for a male lamb originating in feedlot finishing farm and weighing over 26 kilos.
- o 280 pesetas/kilo for a male or female lamb originating in breeding farm and weighing over 26 kilos.
- o 380 pesetas/kilo for male lambs originating in feedlot farm and weighing over 29 kilos.

Weight premiums paid in 1979 and 1980 amounted to 615 million pesetas and 476 million pesetas, respectively.

Market regulation generally depends on the use of weight premiums. The only other direct method is through SENPA's control of exports and imports, although FORPPA does provide loans for private storage contracts and grants export refunds when prices are considered too low. Average liveweight prices

Table 31--Sheep flock numbers and slaughter numbers

Year	Total flock	Age			Total slaughter
		0-12 months	12-24 months	Over 24 months	
		1,000 head			
1960	22,622	4,978	3,588	14,056	10,663
1965	17,073	2,413	2,801	11,861	10,808
1970	17,005	2,483	2,579	12,433	11,532
1975	15,195	2,680	2,774	9,526	11,701
1978	14,522	2,413	2,695	9,414	11,001
1979	13,800	2,540	2,495	8,765	10,284
1980	14,180	2,702	2,575	8,903	10,887

Source: (22).

Table 32--Sheep slaughter numbers and weights

Year	Total	Average	Sucklings		Lambs		Adult sheep	
	slaugh-	slaugh-	Average		Average		Average	
	ter	ter	Number		Number		Number	
	weight	weight	weight	weight	weight	weight	weight	weight
	1,000		1,000		1,000		1,000	
	mt	Kilos	head	Kilos	head	Kilos	head	Kilos
1960	109	10.3	1,413	5.7	7,164	10.0	2,087	14.7
1965	122	11.3	1,542	5.8	7,012	11.0	2,154	16.3
1970	127	11.0	2,441	6.7	7,491	11.2	1,601	16.6
1975	136	11.6	3,041	8.1	7,366	12.1	1,294	17.3
1978	130	11.8	2,654	7.3	7,280	12.5	1,067	17.7
1979	121	11.8	2,650	7.4	6,711	12.7	923	17.8
1980	127	11.6	2,835	7.4	7,228	12.6	814	18.2

Source: (22).

received by producers for a 1-month old lamb were 276.70 pesetas/kilo in 1979 and 292.26 pesetas/kilo in 1980. Prices for a 2- to 3-month old lamb were 202.28 pesetas/kilo in 1979 and 212.06 pesetas/kilo in 1980. Prices for a 3- to 6-month old lamb were 166.09 pesetas/kilo in 1979 and 172.01 pesetas/kilo in 1980. Prices for adult sheep were 61.53 pesetas/kilo in 1979 and 61.65 pesetas/kilo in 1980. Average prices received by producers for sheep's milk, prized by consumers for the Manchego cheese produced from it, were 67.04 pesetas/kilo in 1979 and 54.0 pesetas/kilo in 1980. Average prices received for sheep's wool were 99.22 pesetas/kilo in 1979 and 92.7 pesetas/kilo in 1980.

Sheep production will likely be protected to some degree since Spain has a large amount of marginal pastureland on which only sheep can be raised profitably. This is particularly important with impending EC enlargement since Spain will face stiffer competition in the lamb market from other EC members such as Great Britain and France.

Other Meat Animals

Goats and rabbits are other significant meat animals produced in Spain. There are no Government programs supporting or regulating production of these animals. Goats, not efficient converters of concentrated feeds, generally feed on marginal land. Rabbits, in demand for fur as well as meat, can be fed intensively.

Goat numbers have declined by 40 percent over the last 20 years, but slaughter numbers have remained steady (table 33). Total slaughter weight has decreased, however, in spite of higher average slaughter weights for each carcass category because of the increased slaughter of larger numbers of younger animals relative to mature ones. Goat numbers and goat milk production

Table 33--Goat slaughter numbers and weights

Year	: Total : : weight:	: Average : : weight :	: Sucklings : : Average : : Number:	: Kids : : Average : : Number:	: Mature : : Average : : Number:	: Total : : flock			
	: 1,000 : <u>mt</u>	: 1,000 : <u>Kilos</u>	: 1,000 : <u>head</u>	: 1,000 : <u>Kilos</u>	: 1,000 : <u>head</u>	: 1,000 : <u>Kilos</u>	: 1,000 : <u>head</u>	: 1,000 : <u>Kilos</u>	: 1,000 : <u>head</u>
1960	: 11,744	9.0	589	4.3	476	9.3	327	14.7	3,299
1965	: 11,814	9.4	498	4.8	465	10.2	295	16.0	2,196
1970	: 12,689	9.0	593	4.9	564	10.0	256	16.0	2,551
1975	: 12,126	9.5	745	5.6	397	10.6	205	17.8	2,293
1978	: 12,513	8.8	886	5.9	335	11.0	190	17.4	2,283
1979	: 10,748	8.5	850	6.0	266	11.1	151	17.6	1,973
1980	: 10,981	8.1	949	5.9	262	11.1	145	17.4	1,977
	:								

Source: (22).

should continue to decline slowly as a result of continued competition from poultry, swine, dairy, and beef production, all of which receive Government support.

The average liveweight prices received by producers for a 1- to 2-month old kid were 256.21 pesetas/kilo in 1979 and 268.03 pesetas/kilo in 1980. For a 2- to 8-month old kid, these average prices were 160.16 pesetas/kilo in 1979 and 164.38 pesetas/kilo in 1980. Average prices received by producers for goat's milk, prized for the cheese produced, were 30.29 pesetas/liter in 1979 and 30.17 pesetas/liter in 1980.

The spectacular increase in rabbit production is largely due to the intensive feeding of alfalfa pellets and byproducts from processed vegetables (table 34). Total rabbit slaughter

Table 34--Rabbit slaughter numbers and weights

Year	: Total : : slaughter : : number	: Average : : slaughter : : weight	: Total : : slaughter : : weight
	: 1,000 : head	: Kilos	: 1,000 : mt
1960	: 4,066	1.2	4.8
1965	: 18,055	1.0	18.3
1970	: 20,284	1.2	25.3
1975	: 29,454	1.4	44.2
1978	: 81,087	1.4	111.2
1979	: 81,298	1.4	110.7
1980	: 89,997	1.3	117.6

Source: (22).

weight has almost reached the same level as sheep and lambs (117,600 mt to 127,000 mt, respectively, in 1980). Growth will depend on the demand for rabbit fur as well as the demand for meat.

Fruits, Vegetables, and Nuts Policy

Spain's climate allows for bountiful production of fruits and vegetables which account for the majority of Spanish agricultural export value (see app. table 1). Spain's comparative advantage in the production of these commodities allows it to compete effectively in world markets without significant Government intervention. Government policy is limited to refunds of internal taxes to exporters and provision of some aid to processors in periods of overproduction. The majority of the exports go to Western Europe and are largely made up of oranges and lemons although significant quantities of almonds, tomatoes, potatoes, peppers, cucumbers, garlic, melons, artichokes, and onions are also exported.

Oranges and Lemons

Spain's ideal climate and its relative proximity to the large export market in Western Europe combine to make citrus Spain's largest cash-crop export. Price determination is left largely to market forces since there are no price regulations and all citrus is privately marketed. Average prices received by orange producers were 11,700 pesetas/mt in 1979 and 13,170 pesetas/mt in 1980. For lemon producers, the prices were 22,300 pesetas/mt in 1979 and 25,730 pesetas/mt in 1980.

The Government sanctions a Citrus Coordinating Committee (Comité de Gestión de Exportación de Frutos Cítricos) that manages citrus exports. This group maintains export quality standards, distributes an export tax rebate to producers, promotes citrus exports under the commercial brand SPANIA, and determines who can export citrus. Requirements for exporting oranges include a minimum of 500 tons of exports per season, facilities for grading, packing, and storing, and an efficient business operation which is largely determined by the ratio of earnings to amount exported.

Government aid to the citrus sector in 1979 consisted of aid to control the tristeza and white fly diseases, processing payments for surplus production, and making loans available at 4.8-percent interest for structural improvements and purchase of certain types of machinery. The Government also authorized 612 million pesetas in subsidies to process up to a maximum of 60,000 mt of Satsuma oranges and 50,000 mt of White oranges. These subsidies were authorized as payments to growers at a price of 3,000 pesetas/mt for Satsumas and 3,500 pesetas/mt for Whites.

Orange growers must also apply for permission to plant new trees or replace diseased trees. In 1978, over 1 million new trees were planted and over 1 million diseased trees were replaced with 50 percent of the cost paid by the Government.

Orange production has remained relatively steady, although a rapid and substantial varietal switch from White to Navel

Table 35--Orange and lemon area, production, and trade

Year	Area	Production	Imports	Exports
	<u>1,000 ha</u>	<u>1,000 mt</u>		
Oranges:				
1960	93	1,399	--	883
1965	128	1,738	1	1,000
1970	136	1,597	1	1,140
1975	145	1,991	1	1,026
1978	127	1,633	--	880
1979	124	1,771	--	898
1980	128	1,699	--	819
Lemons:				
1960	NA	88	--	54
1965	16	96	--	44
1970	19	97	--	90
1975	27	254	--	90
1978	31	248	--	221
1979	37	347	--	219
1980	41	336	--	219

NA = not available.

-- = less than 500 mt.

Source: (22).

oranges has occurred recently (table 35). Vigorous marketing of Navel oranges in the EC has allowed Spain to maintain high export levels and far surpass Italy and other suppliers in winter season export sales, the peak season for Mediterranean producers.

Lemon production and exports have expanded rapidly with relatively little aid from the Government (table 35). Loans for structural improvements and replacement of diseased trees were made available in 1980 at 4.5- and 11-percent interest rates, respectively, to be paid back in 10 years. Ceilings of 10 million pesetas per farm or 40 million pesetas per co-operative were also set. An export tax rebate of 6.5 percent is granted to citrus exporters in the following manner: 5 percentage points of the 6.5 percent is returned directly to the exporter and the rest is remitted to the export organization for promotional activities and organization support.

Almonds

High domestic and EC demand for almonds has encouraged Spanish almond expansion the past 20 years (table 36). Spain ranks

Table 36--Almond area, production, and trade

Yield	:	Area	:	Production 1/	:	Exports 1/
	:	1,000 ha	:	- - 1,000 mt - -	:	
1960	:	NA	:	155	:	97
1965	:	240	:	153	:	77
1970	:	299	:	166	:	41
1975	:	500	:	255	:	67
1978	:	532	:	307	:	91
1979	:	556	:	198	:	80
1980	:	565	:	225	:	52

NA = not available.

1/ In-shell basis.

Source: (22).

second to the United States in almond exports to the EC. Increased plantings are expected as EC enlargement nears since Spain, as an EC member, will not be required to pay the 7-percent EC tariff.

Almond trees generally tend to replace olive trees because they can withstand the same poor growing conditions. However, almond trees do not absorb much labor because they are not a full-time crop and have relatively low yields. Widely fluctuating yields contribute to the problematical nature of cultivating almonds. Almonds are thus produced in a small-scale backyard manner in Spain and on a part-time basis. Poor organization in production and marketing has prevented Spain from becoming an even more prominent exporter.

No price regime is in effect and the export price is set on the world market. Almond imports are duty free in Spain although a 5.5-percent compensatory tax is collected and import licenses are usually hard to obtain. Average prices received by producers on an in-shell basis were 84,720 pesetas/mt in 1979 and 123,550 pesetas/mt in 1980.

Although there are no market regulations for almonds in Spain, there are incentives offered to exporters. A tax rebate of 5.5 percent was in effect for 1980, down from 7 percent in 1979. One percentage point of the rebate is returned directly to the exporter and the remainder is used for low-cost loans to producers to modernize packing facilities, to increase working capital, and for other structural improvements. In years of surplus production, export restitutions are offered, the levels of which depend on world marketing conditions and the size of the surplus. In the 1977/78 season, Spanish almond exporters received a 2,500-peseta/mt restitution for exports above 20,000 mt.

Vegetables and Other Horticultural Crops

The Government is sensitive to the relatively wide fluctuations in production and price of vegetables and other horticultural products since they represent an important source of foreign exchange and provide employment opportunities. Many of these commodities have recently been cultivated intensively and production and exports have increased significantly (table 38).

In 1980, the most important horticultural commodities were tomatoes, potatoes, peppers, onions, garlic, melons, artichokes, and cucumbers. These commodities accounted for 604,000 hectares in area planted, and 10.9 million mt in production (potatoes accounted for over 50 percent of both area and production). Export value of these commodities reached nearly 28 billion pesetas in 1980 (tomatoes accounted for almost half) or 10 percent of total agricultural exports by value (22).

Because of the increasing importance of horticultural production and exports, producers are protected to a degree from wide fluctuations in the market although there is no official price regime. Rather, financial aids are offered to processors during periods of low prices that, in effect, guarantee purchase of a crop at an effective minimum price. Export restitutions may also be offered in times of domestic surplus and relatively low world prices. These measures are ad hoc in nature and affect, but do not set, the price on the market.

Export restitutions of 5,000 pesetas/mt for the regular and late season potato crops and 6,000 pesetas/mt for early season potatoes were instituted during the 1978/79 potato season. Annual storage subsidies of 2,000 and 3,000 pesetas/mt were also made available. However, the subsidy received by any exporter is limited by a peseta or tonnage quota. In 1978, 174,000 mt of potatoes were affected by intervention of one form or another, with total subsidies amounting to 1.24 billion pesetas. In addition, maximum commercial margins for potatoes are set at all market levels past the farmgate and size and quality standards are set by the Government.

Table 37--Average prices received by vegetable producers

Crop	1979	1980
	Pesetas/mt	
Potatoes	13,500	10,410
Tomatoes	14,350	15,140
Onions	12,160	13,670
Melons	15,350	19,500
Artichokes	17,880	21,830
Garlic	48,600	51,470
Peppers	19,370	25,290
Cucumbers	NA	NA

NA = not available.

Table 32--Vegetable and horticultural crop area, production, and trade

Year	Area	Production	Imports	Exports
	<u>1,000 ha</u>	<u>1,000 mt</u>		
Potatoes:				
1960	395	4,620	69	113
1965	368	4,079	380	120
1970	397	5,301	67	148
1975	385	5,338	87	96
1978	371	5,364	70	139
1979	355	5,637	111	47
1980	355	5,737	77	60
Tomatoes:				
1960	51	1,148	--	176
1965	55	1,330	--	225
1970	73	1,809	--	187
1975	81	2,488	--	216
1978	72	2,223	--	201
1979	64	2,204	--	315
1980	61	2,147	--	273
Onions:				
1960	33	731	--	89
1965	33	781	2	111
1970	36	890	--	138
1975	33	821	--	148
1978	35	996	--	201
1979	31	891	--	200
1980	32	906	--	198
Melons:				
1960	41	575	--	20
1965	44	575	--	42
1970	57	608	--	63
1975	67	885	--	64
1978	62	676	--	50
1979	68	757	--	62
1980	67	825	--	68
Artichokes:				
1960	8	69	--	5
1965	14	124	--	24
1970	22	220	--	32
1975	19	226	--	31
1978	27	377	--	30
1979	26	296	--	40
1980	22	288	--	32

Continued--

Table 38--Vegetable and horticultural crop area, production, and trade--Continued

Year	Area	Production	Imports	Exports
	1,000 ha	- - - -	1,000 mt	- - - -
Garlic:				
1960	18	115	--	--
1965	19	123	--	--
1970	19	128	--	--
1975	36	192	--	16
1978	36	212	--	11
1979	40	211	--	18
1980	34	212	--	17
Peppers:				
1960	19	312	--	2
1965	22	383	--	2
1970	24	395	--	3
1975	28	460	--	7
1978	29	522	--	28
1979	29	538	--	39
1980	27	551	--	56
Cucumbers:				
1960	3	58	--	--
1965	4	72	--	--
1970	4	73	--	21
1975	5	176	--	48
1978	5	213	--	57
1979	6	244	--	62
1980	6	264	--	53

-- = Less than 500 mt.

Source: (22).

Processing subsidies are made available for tomatoes when the fresh market is in surplus. Tomatoes used for concentrate received a subsidy of 750 pesetas/mt in 1978. A form of price floor is set in years of excess supply by granting credits to processors based on quantity purchased so that the producer receives a minimum price. This credit is granted to the processor and enables that processor to make up the difference between a low market price and a minimum price arbitrarily set by FORPPA. This occurred in 1978 and the minimum price for tomatoes was set at 4,100 pesetas/mt. Export tax rebates on canned tomato products were 12 percent of f.o.b. value in 1978. In addition, producers were allowed credit of 20,000 pesetas/hectare.

These measures are generally designed to keep producers in the market and are done on an ad hoc basis. Limits of area, volume, or credit can be set for each form of aid to processors or producers depending on market conditions. Any of these measures can be employed in the fruit and vegetable sector. Spanish attempts to ensure a steady market have contributed to increased production and exports. These measures will likely continue to increase since Spain anticipates greater market access as an EC member.

Grapes and Wine Policy

The slow evolution of Spanish wine policy has centered on producing quality grapes in order to produce more quality wines under an appellation control program (wine must be marketed by region of production). This policy is expected to aid in exporting better wines. Substantial Government intervention is involved from planting vines to final bottling of the wine because area planted is strictly controlled and wine labeling is inspected.

Past cultivation practices and shortsighted policies have led to large surpluses of poor quality white wine which can only be used for distillation in the production of industrial alcohol. Quality control will continue to be a difficult problem since much of the land on which grapes are cultivated cannot be used for any other crop and only poor quality white wine can be produced from these grapes.

Wine production in Spain has had two advantages over other crops: grapes grown for wine production require less labor compared with other crops grown on similar land and such grapes can be produced on poor land that cannot be used as profitably for anything else. Although the Spanish vineyard is the largest in the world, yields have been very poor (12-18 hectoliters/hectare compared to an average of 37 in France and 30 in Italy). Quality has also been poor. Low yields occur not just because of poor soil but also because of inadequate technology, extensive rather than intensive cultivation, and growers' inability to use fertilizer because of inadequate rainfall (12). Changes in consumer habits and competition from beer and nonalcoholic beverages have led to a decline in domestic per capita consumption.

High guaranteed prices have generated the expansion of grapes on poor land. Emphasis has been on increasing total production and alcoholic content rather than quality for retail marketing because of price incentives (32). Some improvement has occurred since 1953, when cooperatives were formed in order to maintain quality control.

The goal of a 1970 wine statute is the classification of wines on a geographical and varietal basis (Denomination of Origin). The area of classification covers about 60 percent of the vineyards but lack of bottling plants, storage facilities, and the large areas have combined to inhibit effective labelling.

Wine policy in Spain limits new vine plantings. The policy encourages the replacement of old vineyards with new varieties

in an attempt to increase the quality of table grapes and wines. Efforts are also continuing to improve the classification system of table wines.

The Government regulates the wine market through guaranteed, minimum, target, and upper intervention prices. In real terms, the 1980/81 guaranteed minimum, target, and upper intervention prices declined slightly from the 1975/76 prices:

<u>Prices</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>
	<u>Pesetas/liter</u>					
Guaranteed	56.0	58.24	65.52	95.0	120.0	122.5
Target	75.0	77.0	77.0	110.0	140.0	140.0
Upper intervention	83.0	83.0	83.0	150.0	160.0	160.0

Average prices received by producers of white wine were 144.63 pesetas/hectograde in 1979 and 115.40 pesetas/hectograde in 1980. For red wine, these prices were 264.66 pesetas/hectograde in 1979 and 176.67 pesetas/hectograde in 1980. For rose and claret, the average prices received were 198.15 pesetas/hectograde in 1979 and 137.76 pesetas/hectograde in 1980.

Wine production exceeded 48 million hectoliters in 1979, a record, following a good output of 29 million hectoliters in 1978 (table 39). This 1-year jump in production clearly indicates the volatility of grape production and the tendency of Spanish producers to maximize production since most of land used for grapes cannot be profitably cultivated in other crops. Because of the surplus created by the record crop in 1979, new table grape area was limited to 500 hectares and new plantings destined for table wine production were not allowed in the 1979/80 season.

SENPA must buy all wine offered at the guaranteed price. When the reference price falls below the target price for over 2

Table 39--Grape and wine area, production, and trade

Year	: Area	: Grape production	: Wine	: Table grapes	: Table grape exports	: Wine exports
	: 1,000 ha	: 1,000 mt	: 1,000 hl	- - - - 1,000 mt - - - -		
1960	: 1,815	3,368	20,957	227	62	120
1965	: 1,688	4,376	26,452	280	103	215
1970	: 1,626	4,140	25,605	315	120	327
1975	: 1,740	5,202	32,469	448	136	516
1978	: 1,730	4,688	29,461	352	50	369
1979	: 1,717	7,638	48,205	494	80	638
1980	: 1,726	6,721	42,402	405	66	578

Source: (22).

weeks, SENPA offers premiums to producers to keep wine off the market (immobilization) or buys it for distillation. When the reference price is 98 percent of the upper intervention price, FORPPA may propose measures to balance the market by allowing imports or selling stocks.

Before August of each year, the maximum vineyard area is determined by taking the average demand in the last three seasons (demand = internal consumption + exports + alcohol distilled from grapes + vinegar consumption + grape juice consumption) corrected by forecasts for stock and demand variations. Supply is calculated by taking the average production of wine for the 3 previous years plus the stocks available as of November 1. The difference between the demand and supply determines the amount of land to be put into production. This is done by approving or disapproving new plantings.

Control of wine quantity and quality gains importance as integration into the EC draws near. Spanish wines are currently imported by the EC for blending because Spanish wines are high in alcoholic content. Spain expects to export much more to the EC after accession.

Industrial Crops Policy

Self-sufficiency is the primary goal of the Spanish sugar policy. This goal has been largely met, albeit at prices often higher than world sugar prices. The self-sufficiency policy principally affects sugarbeets which are completely regulated under a quota system favoring small producers. Spanish confectioners have lobbied for lower prices and have gained access to cheaper imports. Sugarcane production has remained stagnant as sugarbeet production has increased.

Spain's tobacco program is administered by a State monopoly that controls planting, harvesting, and quality. Major policy objectives are to control quality and increase production, and to provide low-income farmers in depressed economic regions with an added source of income.

Spanish cotton policy is geared to increasing the quantity and quality of cotton production through increased mechanization. The policy is complicated by high rates of unemployment in the cotton producing region. Wage concessions have been necessary to counter the fears of labor groups. This policy has had mixed results since cotton area has recently increased significantly but unemployment remains high.

Sugarbeets

Because of wide fluctuations in world prices and production, Spanish sugar policy pursues self-sufficiency by means of regulated prices and subsidies. Subsidies include providing free seed and herbicides and financing the purchase of harvest machinery. World sugar prices determine policy to some extent because manufacturers of confectionery attempt to pressure the Government into allowing cheap imports. As a result, a sugar agreement with Cuba is responsible for most of the sugar imports. However, because of accumulated sugar surpluses in 1978/79, imports were temporarily postponed.

Market regulation is severe and complicated. A target production level is set each year and the price to the producer is fixed. All sugarbeets must be delivered to refineries on a contract basis. Each farmer is assessed a maximum quota that can be delivered in that year. The quota and the price are established in September for the following season that starts in July. Variations in prices are allowed depending on the quality of the sugarbeets delivered. FORPPA may also release sugar to prevent consumer prices from rising too high. The system has been successful if judged by the fact that domestic production has increased substantially (table 40).

The sugar extraction percentage determines the amount of either a premium for high-grade beets or a discount for low-grade beets. The 1978/79-1980/81 premiums and discounts were based on the following sugar extraction percentages:

<u>Sugar content (pct)</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>
	<u>Pesetas/mt</u>		
More than 17	+27.57	+29.29	+30.99
16.1 - 17	+24.62	+26.15	+29.23
16	0	0	0
15 - 15.9	-24.62	-26.15	-29.23
Less than 15	-27.57	-29.29	-30.99

The premium was then added on or the discount subtracted from a fixed price of 3,200, 3,400, and 3,800 pesetas/mt for the same years. The average price received by producers was 3,340 pesetas/mt in 1979 and 3,860 pesetas/mt in 1980.

Table 40--Sugarbeet area, production, and trade

Year	Area	Production	Sugar	Pulp	Sugar imports
	<u>1,000 ha</u>		<u>1,000 mt</u>		
1960	145	3,507	447	177	32
1965	146	3,664	478	198	135
1970	221	5,415	691	307	134
1975	200	6,337	844	381	476
1978	235	8,291	1,037	476	86
1979	166	5,124	657	292	158
1980	183	6,909	890	366	5

Source: (22).

Farmers delivering beets are also compensated for transportation costs based on distance. ^{15/} The following compensation schedule was in effect for the 1977/78 season:

<u>Distance to receiving center (km)</u>	<u>Pesetas/mt</u>
0-30	150
31-60	200
61-100	250
101-150	300
151-200	350
More than 200	400

A special program for small farmers that deliver 400 mt or less of sugarbeets to reception centers adds to a farmer's guaranteed price. This program included an automatic subsidy of 150 pesetas/mt that was provided to small farmers delivering 200 mt or less for the 1977/78 season if the sugar content was 13 percent or more. The 200-mt limit was increased to 400 mt in the 1980/81 season. The small farmer with a quota of less than 400 mt is also protected in case of surplus national production; that farmer's quota is not reduced for the next year. Those with quotas of over 400 mt are reduced in a progressive manner.

Subsidies for small farmers totaled 558 million pesetas in the 1978/79 season and total purchases of sugarbeets by FORPPA reached 8 billion pesetas. All farmers now receive a subsidy on the first 400 mt delivered with small farmers receiving higher subsidies.

Byproducts of sugarbeet processing are handled by SENPA through intervention. Intervention prices are set according to the type and quality of byproduct obtained after processing. Intervention prices in 1977/78 ranged from 5,814 pesetas/mt for molasses to 8,083 pesetas/mt for baled raw pulp.

Sugarcane

Sugarcane production has stagnated in Spain, largely because sugarbeets are more productive and economical in providing the great bulk of Spanish sugar (table 40). Regulation of the sugarcane market is essentially the same as the sugarbeet market. Target production levels are set by FORPPA and quotas distributed among the producers before the planting season. A fixed base price is set with premiums and discounts added to or subtracted from this price depending on the percentage of sugar extracted. Base prices for the 1978/79-1980/81 seasons were 2,240, 2,380, and 2,660 pesetas/mt. The premiums and discounts were:

^{15/} There has also been a longstanding Government policy to tax gasoline allocated to the agricultural sector at a lower rate.

<u>Sugar content (pct)</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>
	<u>Pesetas/mt</u>		
More than 13.1	+27.57	+29.29	+32.74
12.7 - 13.1	+26.09	+27.72	+30.99
12.2 - 12.6	+24.62	+26.15	+29.23
12.1	0	0	0
11.6 - 12.0	-24.62	-26.15	-29.23
11.1 - 11.5	-26.09	-27.22	-30.98
10.6 - 11.0	-27.57	-29.29	-32.74

A flat transportation subsidy of 140 pesetas/mt was granted without respect to distance. Small farmers with quotas of 300 mt or less received subsidies totaling 23 million pesetas for the 1978/79 season. This program benefits the eastern Andalusia area where most of the sugarcane is produced.

Spain's policy on sugar varies from year to year depending on the level of self-sufficiency attained in sugar. Domestic prices will likely continue to be higher than world prices since Spain is determined to attain and maintain self-sufficiency in sugar production.

Tobacco

Tabacalera S.A., the Spanish state trading company, was granted a monopoly on producing, marketing, and trading tobacco in Spain in 1944. Total control of the tobacco market has been exercised by the Government since then. The main objectives of Spain's tobacco policy are to improve quality through price management and to improve farm income in the main tobacco regions.

Tobacco is generally grown in economically depressed areas (Extremadura, Andalusia, and Canary Islands) that have high

Table 41--Sugarcane area and production

Year	:	Area	:	Cane	:	Sugar
	:		:	production	:	production
	:	<u>1,000 ha</u>	:	- - <u>1,000 mt</u>	:	- -
1960	:	5	:	299	:	25
1965	:	5	:	435	:	39
1970	:	5	:	410	:	39
1975	:	4	:	273	:	24
1978	:	5	:	317	:	4
1979	:	5	:	350	:	4
1980	:	4	:	297	:	14

Source: (22).

rates of rural emigration and unemployment. Tobacco is a logical choice for these labor surplus regions because it is a labor-intensive crop and agronomically compatible with the regions.

The tobacco crop is controlled from seedling distribution to the retail market. The National Crop and Curing Service (Servicio Nacional de Cultivo y Fermentación), an agency of Tabacalera, grants licenses to those approved for tobacco production. The service gives free seeds to producers, controls planting and cultivation, receives the crop in curing centers, buys the crop, and often cures it. The service also restricts the growing area to certain regions of Spain where quality tobacco can be grown and sets a maximum area that can be planted to a certain type of tobacco. The policy has not been successful in increasing production but has maintained both area and production. The goal of increasing quality has apparently not been met, because imports of quality tobacco have increased considerably (table 42).

In the 1977/78 season, the best tobacco category, type A (Dark), which accounts for 18 percent of total production, was limited to 1,460 hectares. Type B (Blond), a good quality tobacco that accounts for 80 percent of total production, was limited to 20,175 hectares. A grower must plant a minimum of 2,000 plants and harvest at least 25 kilos to qualify for the program (26). These constraints are not in effect for those regions that have a high degree of farm fragmentation.

Prices are set annually for each tobacco class and quality grade within the class. Government loans are granted for tobacco drying machines in order to improve quality. Fixed prices for type B (Blond) tobacco within each quality grade of the various tobacco classes for the 1979/80-1980/81 seasons are presented in table 43.

Table 42--Tobacco area, production, and trade

Year	Area	Production	Imports
	1,000 ha	- - 1,000 mt - -	
1960	18	30	29
1965	21	34	42
1970	15	26	54
1975	15	26	59
1978	16	30	68
1979	18	35	72
1980	20	37	77

Source: (22).

Table 43--Prices: Type B (Blond) tobacco

Quality grade	Tobacco class				
	I	II	III	IV	V
	<u>Pesetas/kilo</u>				
1979/80:					
First	155.8	145.2	136.3	101.9	95.1
Second	101.4	94.6	88.8	52.6	58.4
Third	68.4	63.9	60.1	46.0	43.1
Fourth	18.1	16.8	15.8	13.2	12.4
1980/81:					
First	188.4	175.7	164.9	123.3	115.0
Second	122.6	114.5	107.4	75.8	70.6
Third	82.8	77.3	72.7	55.6	52.1
Fourth	21.9	20.3	19.2	15.9	15.0

Source: (26).

A "superprice" is offered in the first quality grade of all classes if quality exceeds the standard set for that grade. This "special tobacco" can bring a price from 20 to 60 percent higher than the fixed prices. Average prices received by producers for type B (Blond) were 154.13 pesetas/kilo for the 1979/80 season and 165 pesetas/kilo for the 1980/81 season (preliminary).

Imports are restricted through high tariffs, but loose leaf tobacco imports, principally from the United States, are increasing for blending with inferior Spanish tobacco to provide better flavor to Spanish cigarettes.

Cotton

Spanish cotton policy objectives are to satisfy domestic demand for quality fiber, reduce costs through mechanization, and increase employment. The Government argues that increased harvest mechanization will lead to more cotton production because of lower costs and, therefore, create more jobs in handling and processing fiber. This argument recognizes that current high-cost, handpicked cotton production may lead to cultivation of other less labor-intensive crops. Labor organizations have strenuously resisted this policy and were politically powerful enough to require that a subsidy of 12,000 pesetas/mt be guaranteed to producers marketing handpicked cotton in the 1979/80 and 1980/81 seasons. However, a 5-year harvest mechanization subsidy program began in 1978 to reduce harvesting costs by decreasing the amount of hand-harvested cotton. This program aims to increase total cotton acreage to 100,000 hectares.

Labor absorbs nearly 70 percent of the cost of handpicked cotton. Mechanical harvesting would reduce costs by 36,000 pesetas/mt--roughly 80 percent (12). Part of the reduced cost comes from a Government program that subsidizes 40 percent of the cost of an imported cotton harvester. In addition, the Government offered a 7,000-peseta/mt premium for cotton mechanically harvested in the 1979/80 and 1980/81 seasons to counteract some of the 12,000-peseta/mt premium granted to handpicked cotton.

Severe disruptions of mechanical harvesting of cotton by labor groups in the seventies prevented widescale mechanization and both area and production declined (table 44). Whether cotton production in Spain will return to previous levels is unknown, although production and area have increased in 1979 and 1980.

Phytosanitary products to combat pests and disease are provided to producers free of charge by the Government. The Government also controls distribution of cottonseed in order to ensure quality by specifying appropriate varieties for each region.

A marketing scheme is devised each year which allows cotton producers three methods of contract selling:

- o Producer pays ginning costs and the fiber and seed obtained are returned to the producer.
- o Producer sells fiber to the cotton ginner and does not receive the seed.
- o Producer sells cotton to the ginning facility at the bulk price without incurring ginning costs.

These contracts are arranged before the harvest season and the producer is obligated to deliver all production as established in the contract.

Table 44--Cotton area, production, and trade

Year	Area	Production	Imports
	1,000 ha	- - 1,000 mt - -	
1960	250	217	35
1965	198	249	31
1970	91	160	43
1975	62	160	86
1978	43	97	55
1979	50	127	73
1980	63	189	74

Note: No exports.

Source: (22).

Those producers and ginnerers selling cotton fiber receive a compensating premium equal to the difference between a theoretical price for national fiber and a theoretical price for imported fiber. The theoretical national price includes the minimum guaranteed price at the authorized cotton ginning facility plus costs for ginning, marketing, transporting to Barcelona, and other unspecified costs. The theoretical import price is based on the quoted price at the A index Liverpool market for Strict Middling 1 1/16" fiber plus importing, marketing, and transporting costs. For the 1977/78 season, the premium was fixed at 186.74 pesetas/kilo. For the 1980/81 and 1981/82 seasons, the premiums were set at 226.69 and 250.44 pesetas/kilo, respectively.

The minimum guaranteed prices for the different classes of bulk American style seed cotton for the 1978/79-1980/81 seasons were:

<u>Class</u>	<u>1978/79</u>	<u>1979/80</u>	<u>1980/81</u>
	<u>Pesetas/mt</u>		
First	52,000	58,000	64,000
Second	47,750	55,000	61,600
Third	46,500	51,000	56,000
Fourth	44,000	48,000	52,000
Fifth	37,000	41,000	44,000

Average prices received by producers for bulk cotton were 70,000 pesetas/mt in 1979 and 76,000 pesetas/mt in 1980.

Forage Crops and Feed Pulses Policy

Feeding systems emphasizing production of pulses for protein feed and production of forage crops as an energy feed for beef cattle are thought to have great potential by Spanish agriculturalists. Both types of crops can be grown relatively easily in Spain compared to other protein or energy-rich crops. Main hindrances to increasing forage production are the lack of water (hence, competition with highly profitable crops) and the lack of pasture management skills required to operate a large, economically viable operation. The greatest barrier to increased pulse production is the lack of varieties suited to mechanization. The cultivation and exploitation of both forage and pulse crops require innovations in management and marketing.

Forage Crops

The shift in consumer demand to animal protein over the past 20 years has increased the demand for energy sources of animal feed. Area of many forage crops has expanded and yields have increased due to improved pasture management, better varieties, and greater use of fertilizer (table 45). Improved rations for livestock through increased use of protein feeds have also increased the demand for forage crops that provide the complementary energy requirements.

There is no market regulation of forage crops, although much experimental work continues in order to find more efficient methods of feeding cattle with domestic crops. Spanish

Table 45--Forage crop area and production

Year	Area	Production	Year	Area	Production
	1,000 ha	1,000 mt		1,000 ha	1,000 mt
Forage:			Vetch:		
1960	141	1,826	1960	55	612
1965	184	2,403	1965	48	548
1970	168	2,171	1970	99	1,188
1975	154	2,146	1975	135	1,754
1978	173	2,388	1978	108	1,566
1979	200	2,615	1979	101	1,497
1980	206	2,872	1980	101	1,517
Alfalfa:			Hay:		
1960	153	5,743	1960	83	2,478
1965	188	7,083	1965	65	2,527
1970	255	9,448	1970	108	3,889
1975	314	13,286	1975	116	4,530
1978	322	13,905	1978	133	4,871
1979	339	15,052	1979	139	5,139
1980	335	14,601	1980	138	4,988

Source: (19).

researchers are confident that forage crops can be increased greatly, leading to less reliance on imported feed grains. Alfalfa can be harvested, on average, more than five times a year in irrigated areas of the north-central region. Mechanized harvesting, improved pasture management, and pelletization of these crops into concentrated form are promising research areas.

Pulses

Spanish researchers believe feed pulses could serve as a domestic source of vegetable protein that would decrease dependence on soybean imports. Only about 5 percent of the Spanish pulses are used for livestock feeding. Profitability is a severe problem because current pulse varieties in Spain cannot be mechanically harvested. The task of developing new varieties has been assigned to INIA (Instituto Nacional de Investigaciones Agrarias--National Institute for Agricultural Research) and SENPA.

The price regime for the feed pulses consists of a guaranteed price and monthly payments of 140 pesetas/mt for storage costs. Quality premiums and discounts are offered for protein content. The average guaranteed price for broad beans, horse beans, and other feed pulses was set at 20,400 pesetas/mt for 1979/80, up nearly 20 percent from 1978/79.

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Appendix table 1--Value of agricultural exports of Spain

SITC	Commodity	1967			1973			1979		
		World	EC	U.S.	World	EC	U.S.	World	EC	U.S.
		U.S. \$1 million								
01	Meats and preparations	3.7	2.6	0	18.4	11.0	0.2	36.4	10.1	0
011	Fresh and frozen meat	3.3	2.5	0	16.8	10.4	0	29.3	8.2	0
02	Dairy products and eggs	.2	0	0	3.5	.9	0	30.0	.6	0
025	Eggs	0	0	0	1.8	0	0	29.6	.1	0
03	Fish and preparations	51.1	16.4	4.2	166.8	48.1	13.8	408.2	91.6	13.5
04	Cereals and preparations	62.9	.9	0	41.8	8.1	0	58.1	4.1	1.3
042	Rice	15.7	.9	0	9.6	1.4	0	19.4	2.6	0
046	Wheat meal, flour	21.3	0	0	9.1	0	0	26.8	0	0
05	Fruits and vegetables	357.7	243.7	35.7	777.1	550.6	77.1	1,995.9	1,536.8	104.4
051	Fresh fruits and nuts	215.8	161.4	1.0	416.8	342.4	.3	1,105.2	935.3	.9
0511	Oranges and tangerines	137.8	115.3	0	245.4	221.0	0	718.5	652.6	0
0512	Lemons and grapefruits	6.3	4.6	0	25.7	17.5	0	108.9	84.7	0
0515	Fresh grapes	18.3	13.7	0	20.7	15.7	0	41.1	31.0	0
0517	Edible fresh nuts	39.9	13.7	0	20.7	15.7	0	41.1	31.0	0
0519	Other fresh fruit	8.3	6.8	0	109.7	75.2	0	143.1	81.1	0
053	Prepared and preserved fruit	27.7	23.4	.1	91.4	68.6	5.7	148.1	107.3	8.0
0535	Fruit and vegetable juice	7.8	6.1	0	23.9	11.0	0	32.4	15.8	0
0539	Preserved fruits and nuts	17.6	15.9	0	57.5	50.4	0	91.1	76.7	0
054	Fresh vegetables	54.9	46.9	.2	88.3	84.0	.3	436.2	389.3	1.1
0541	Potatoes	7.0	6.9	0	9.2	8.8	0	18.0	17.5	0
0544	Fresh tomatoes	25.8	22.6	0	40.8	36.6	0	200.0	178.9	0
055	Preserved vegetables	56.0	10.6	33.9	161.5	54.2	70.8	302.1	103.5	62.1
07	Coffee, tea, cocoa, spices	11.6	4.7	2.3	33.4	12.9	11.9	147.5	73.9	16.8
1	Beverages and tobacco	58.1	37.2	5.1	221.2	141.2	28.2	483.7	251.7	41.9
1121	Wines	52.4	36.3	3.1	198.9	135.5	21.2	399.6	231.6	18.0
4	Animal and vegetable oil	63.7	34.7	9.5	205.5	100.5	16.1	403.6	104.2	16.3
4212	Soybean oil	.4	0	0	15.5	0	0	203.6	12.6	0
4215	Olive oil	60.2	33.4	9.5	182.6	96.8	16.1	188.5	86.7	16.3
	Agricultural commodities, total:	595.3	342.8	56.5	1,399.0	884.2	140.4	3,833.2	2,200.5	209.6
	All commodities, total	1,375.2	601.1	200.8	5,161.6	2,469.7	714.3	18,196.1	8,736.2	1,268.5

Source: (36).

Appendix Table 2--Quantity of agricultural exports of Spain

SITC	Commodity	1967			1973			1979		
		World	EC	U.S.	World	EC	U.S.	World	EC	U.S.
						<u>1,000 mt</u>				
01	Meats and preparations	--	--	--	--	--	--	--	--	--
011	Fresh and frozen meat	3.6	2.7	0	11.6	7.5	0	14.6	4.9	0
02	Dairy products and eggs	--	--	--	--	--	--	--	--	--
025	Eggs	0	0	0	2.7	0	0	22.3	.2	0
03	Fish and preparations	--	--	--	--	--	--	--	--	--
04	Cereals and preparations	--	--	--	--	--	--	--	--	--
042	Rice	109.4	6.4	0	48.4	6.8	0	55.3	8.4	0
046	Wheat meal, flour	289.4	0	0	62.3	0	0	167.7	0	0
05	Fruits and vegetables	--	--	--	--	--	--	--	--	--
051	Fresh fruits and nuts	1,501.0	1,226.5	5.0	2,093.2	1,840.5	.7	2,085.5	1,820.9	.2
0511	Oranges and tangerines	1,187.7	1,005.9	0	1,645.7	1,482.0	0	1,551.6	1,393.2	0
0512	Lemons and grapefruits	60.2	47.8	0	161.1	126.4	0	224.7	167.6	0
0515	Fresh grapes	81.9	63.1	0	111.8	87.8	0	80.0	61.6	0
0517	Edible fresh nuts	37.0	18.9	0	43.8	28.4	0	36.7	20.9	0
0519	Other fresh fruit	81.9	68.8	0	123.9	111.5	0	182.6	169.7	0
053	Prepared and preserved fruit	115.4	99.4	2.5	245.8	187.9	10.8	207.6	162.8	7.8
0535	Fruit and vegetable juice	24.5	19.6	0	58.7	28.6	0	39.1	21.6	0
0539	Preserved fruits and nuts	76.3	69.1	0	155.2	135.6	0	140.2	122.4	0
054	Fresh vegetables	571.7	507.4	.6	631.7	538.5	.3	893.6	817.7	1.6
0541	Potatoes	116.5	114.6	0	110.3	106.0	0	46.9	45.5	0
0544	Fresh tomatoes	223.1	194.7	0	180.4	161.8	0	315.4	282.2	0
055	Preserved vegetables	107.4	28.1	55.3	250.1	103.9	80.7	292.7	101.7	94.3
07	Coffee, tea, cocoa, spices	--	--	--	--	--	--	--	--	--
1	Beverages and tobacco	--	--	--	--	--	--	--	--	--
1121	Wines	266.7	123.9	6.3	407.8	222.3	39.6	582.3	219.8	11.3
4	Animal and vegetable oil	--	--	--	--	--	--	--	--	--
4212	Soybean oil	1.3	0	0	59.8	0	0	311.4	18.1	0
4215	Olive oil	92.0	52.2	14.7	155.4	84.2	13.6	109.0	52.6	9.0
	Agricultural commodities, total:	--	--	--	--	--	--	--	--	--
	All commodities, total	--	--	--	--	--	--	--	--	--

-- = Less than 100 mt or not applicable.

Source: (36).

Appendix table 3--Value of agricultural imports of Spain

SITC	Commodity	1967			1973			1979		
		World		U.S.	World		U.S.	World		U.S.
		EC	EC	U.S.	EC	EC	U.S.	EC	EC	U.S.
					U.S. \$1 million					
01	Live animals									
0011	Bovine cattle	9.0	3.7	1.5	20.7	10.3	1.9	37.9	29.7	2.4
01	Meat and preparations	4.4	1.4	0	13.1	6.3	.8	29.7	24.9	.6
011	Fresh and frozen meat	77.8	9.5	.2	160.9	13.8	.4	301.5	93.9	18.0
0111	Bovine, fresh or frozen	71.2	5.1	.1	149.8	5.7	.2	276.0	71.5	18.0
0113	Pig meat, fresh or frozen	67.4	3.2	0	100.3	1.2	0	169.2	43.2	0
0114	Poultry, fresh or frozen	.9	.2	0	42.6	9.5	0	71.1	25.0	2.6
02	Dairy products and eggs	1.9	1.7	.1	1.6	1.2	0	22.6	2.8	13.2
022	Milk, cream	21.7	19.5	.2	46.8	38.9	1.5	140.6	114.8	2.0
024	Cheese and curd	15.1	14.8	.2	35.0	29.1	.3	68.0	63.8	1.9
03	Fish and preparations	5.1	4.1	.3	13.0	9.3	1.7	65.9	45.3	0
04	Cereals and preparations	18.9	8.0	.2	93.9	36.9	.6	404.2	117.0	3.1
041	Wheat	216.7	56.2	7.15	301.8	8.0	184.0	699.2	15.0	432.0
043	Barley	0	0	0	.4	.3	0	40.4	.1	26.3
045	Maize	31.6	24.9	0	.5	.5	0	1.5	.6	0
05	Fruits and vegetables	166.6	26.3	69.0	273.0	2.6	182.1	577.1	.3	391.5
051	Fresh fruits and nuts	34.7	19.4	3.4	75.2	26.6	8.0	189.9	61.7	22.8
0517	Edible fresh nuts	2.1	.8	0	12.0	4.6	2.8	42.4	14.2	13.0
053	Preserved fruit	.9	0	0	6.0	.6	2.8	21.1	1.5	
054	Fresh vegetables	5.0	.8	1.1	11.2	2.9	.7	29.7	2.2	1.0
06	Sugar and preparations, honey	24.7	16.2	1.9	43.1	15.5	3.4	101.7	40.2	4.4
07	Coffee, tea, cocoa, spices	27.4	1.4	0	26.8	8.5	0	53.4	12.9	.7
08	Animal feeding stuff	46.1	1.5	0	151.3	4.4	0	558.6	14.5	.2
0813	Vegetable oil residues	26.2	1.9	1.8	308.0	28.4	84.2	126.9	14.4	61.6
09	Miscellaneous food preparations:	2.2	.1	1.2	280.5	21.8	82.3	100.9	.8	60.9
1	Beverages and tobacco	2.5	1.1	.3	12.1	9.1	.9	36.0	29.6	1.9
1124	Distilled alcoholic beverages:	62.2	13.1	18.4	145.5	28.3	33.5	325.6	96.6	87.4
12	Tobacco and manufactures	9.3	9.0	.1	18.4	17.5	.3	64.7	62.1	0
21	Hides and skins, undressed	51.7	3.0	18.3	105.3	7.1	33.3	247.3	23.5	86.4
2214	Soybeans	29.1	7.7	3.3	119.1	25.5	13.2	233.9	52.8	43.9
263	Cotton	96.6	0	91.7	194.5	.3	194.2	656.3	0	508.5
		19.0	.2	.5	80.0	.3	22.0	138.2	2.3	29.5
	Agricultural commodities, total:	772.6	153.8	205.7	1,880.2	253.3	566.9	4,020.5	649.9	1,271.2
	All commodities, total	3,453.1	1,607.7	582.0	9,536.1	4,087.9	1,547.0	25,370.1	9,117.9	3,133.4

Source: (36).

Appendix table 4--Quantity of agricultural imports of Spain

SITC	Commodity	1967			1973			1979		
		World	EC	U.S.	World	EC	U.S.	World	EC	U.S.
		1,000 mt								
01	Live animals									
0011	Bovine cattle	5.7	1.5	0.1	8.5	3.1	0.3	--	--	--
01	Meat and preparations	4.0	1.2	0	6.2	2.8	.3	15.2	13.4	0.1
011	Fresh and frozen meat	--	--	--	--	--	--	--	--	--
0111	Bovine, fresh or frozen	113.3	9.2	.1	21.9	5.9	.1	150.0	46.4	11.1
0113	Pig meat, fresh or frozen	106.7	5.7	0	75.7	1.1	0	79.9	26.5	0
0114	Poultry, fresh or frozen	1.2	.2	0	38.8	2.9	0	43.4	17.1	.9
02	Dairy products and eggs	3.5	3.2	.1	2.2	1.7	0	16.5	2.0	8.7
022	Milk, cream	--	--	--	--	--	--	--	--	--
024	Cheese and curd	52.4	51.6	.4	104.0	96.4	1.3	121.2	110.9	5.3
03	Fish and preparations	6.8	5.6	0	9.3	6.8	0	26.6	18.8	0
04	Cereals and preparations	--	--	--	--	--	--	--	--	--
041	Wheat	--	--	--	--	--	--	--	--	--
043	Barley	0	0	0	1.4	1.3	0	225.2	.2	144.7
045	Maize	465.7	365.1	0	1.9	1.9	0	9.7	4.0	0
05	Fruits and vegetables	2,575.2	413.1	1,007.3	2,717.6	20.6	1,877.8	4,369.9	.2	2,948.6
051	Fresh fruits and nuts	--	--	--	--	--	--	--	--	--
0517	Edible fresh nuts	9.4	2.9	0	29.1	13.7	2.3	50.2	24.9	7.0
053	Preserved fruit	3.0	0	0	8.6	.6	2.3	13.5	.8	.6
054	Fresh vegetables	15.6	2.0	2.9	24.6	3.7	1.3	36.2	1.9	6.5
06	Sugar and preparations, honey	284.4	216.5	8.4	203.6	98.0	10.5	198.4	115.0	--
07	Coffee, tea, cocoa, spices	--	--	--	--	--	--	--	--	--
08	Animal feeding stuff	--	--	--	--	--	--	--	--	--
0813	Vegetable oil residues	20.9	.5	9.7	782.7	54.1	217.0	393.0	2.4	236.2
09	Miscellaneous food preparations:	--	--	--	--	--	--	--	--	--
1	Beverages and tobacco	--	--	--	--	--	--	--	--	--
1124	Distilled alcoholic beverages:	6.2	5.9	0	12.7	12.1	.1	23.5	22.5	0
12	Tobacco and manufactures	--	--	--	--	--	--	--	--	--
211	Hides and skins, undressed	50.4	12.0	8.7	79.3	18.3	13.4	101.4	40.1	21.9
2214	Soybeans	813.2	0	768.4	834.5	1.8	832.7	2,237.0	0	1,730.6
263	Cotton	28.8	.4	1.2	99.1	.7	29.2	88.2	3.3	18.8
	Agricultural commodities, total:	--	---	--	--	--	--	--	--	--
	All commodities, total	--	--	--	--	--	--	--	--	--

-- = Less than 100 mt or not applicable.

Source: (36).

Appendix table 5--Target prices

Commodity	Unit	Price 1980/81	Price 1981/82	Percentage change
		- - Pesetas - -		Percent
Barley (no. 2)	: Kilo	: 16.65	: 18.30	: 9.9
Beans, horse	: do.	: 21.20	: 25.00	: 17.9
Beef	: do.	: 229.00	: 267.00	: 16.6
Chicken	: do.	: 95.00	: 106.00	: 11.6
Corn (standard)	: do.	: 16.65	: 18.50	: 11.1
Cotton	: do.	: 64.00	: 72.00	: 12.5
Eggs	: Dozen	: 53.00	: 63.00	: 18.9
Milk	: Liter	: 21.50	: 23.50	: 9.3
Oats (no. 2)	: Kilo	: 11.70	: 14.70	: 13.7
Olive oil	: do.	: 126.00	: 140.00	: 11.1
Pork	: do.	: 119.00	: 124.00	: 4.2
Rice	: do.	: 18.65	: 22.00	: 18.0
Rye (standard)	: do.	: 12.90	: 13.30	: 14.0
Sorghum (standard)	: do.	: 14.45	: 16.75	: 15.9
Sugarcane	: do.	: 2.66	: 3.06	: 15.1
Sunflowers	: do.	: 30.00	: 33.00	: 10.0
Wheat (soft no. 3)	: do.	: 16.65	: 18.30	: 9.9
Wine	: Hectograde	: 121.00	: 130.00	: 7.4

Source: (12).

Appendix table 6--Official wheat grading standards for the 1980/81 season

	Durum			Hard and soft wheat
	I	II	III	
Moisture (pct)	12	15	15	15
Minimum test weight (kilos/hl)	80	76	73	75
Vitreous kernel content (no)	75	75 (& under)	--	--
Total undesirable material (max. no)	9	9	9	9
Undesirable kernels (max. no)	1.5	1.5	1.5	1.5
Germinated kernels (max. no)	1	1	1	1
Miscellaneous undesirable material (pct)	.5	.5	.5	.5
Kernels of soft and/or hard wheat (no)	4	4	4	--

-- = Does not apply.

Source: (12).

Appendix table 7--Official grading standards for feed grains, 1980

	Barley		Corn	Sorghum	Oats
	Feed	Malting			
Broken kernel (pct)	1	1	4	2	1
Damaged kernel (pct)	1	1	3	3	1
Other cereals (pct)	2	2	2	2	2
Moisture (pct)	13	13	14	14	13
Test weight (min)	60	64	66	68	49
Undesirable matter (pct)	2	2	2	2	2

Appendix table 8--Sheep and goat milk production and use

Year	Sheep milk			Goat milk		
	Total	Human	Cheese	Total	Human	Cheese
	production	consumption	consumption	production	consumption	consumption
	<u>Million liters</u>					
1960	258	16	98	325	237	19
1965	324	10	129	325	192	36
1970	268	9	176	305	200	51
1975	231	5	192	289	167	85
1978	207	13	NA	286	150	NA
1979	205	10	NA	292	157	NA

NA = not available.

Source: (32).

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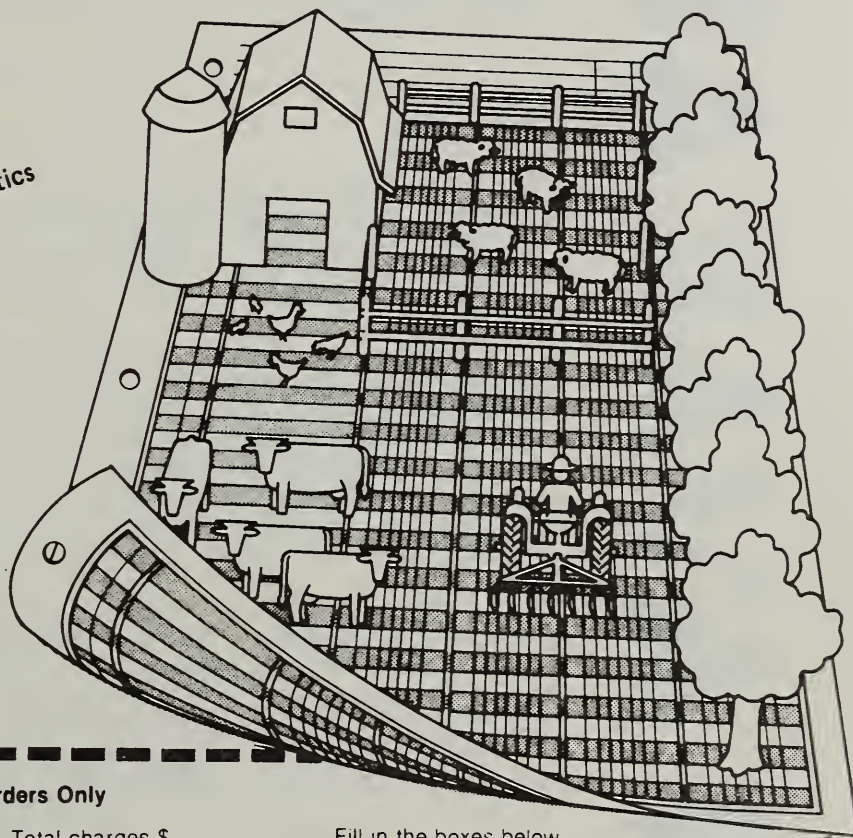
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